COMMODORE

COMPUTING INTERNATIONAL

375

JULY 1989

Disk Print Options Configure Quit
000125
GHOST HOUSE
CAPTURE THE GHOSTS
COLLECT THE KEYS
SAVE THE CITY!

ONE DAY ALL COMPUTERS WILL BE LIKE THIS
THE AMAZING TRANSPUTER

DISK DISECTOR

MICROPROSE FLIES HIGH

THE MUNCHER
STORMLORD
STREETSPORTS FOOTBALL
THE REAL GHOSTBUSTERS
ONE-ON-ONE

£1.20
BELGIUM FR118
USA $3.50
GERMANY DM7

WIN! PORTABLE CD PLAYERS, OCEANIC DISK DRIVES AND MUCH MORE

07
0 74470 12127 5

THE AMAZING AMIGA . . .

COMMODORE AMIGA 500

Commodore
AMIGA 500
Your Imagination is the limit

Pack Includes:
A500 CPU, Mouse, P.S.U., T.V. Modulator, Very First Tutorial, Workbench 1·3, Basic, Extras and Manuals.

PLUS POSTRONIX BONUS PACK

WORTH OVER £250 which includes 10 Blank Disks, Disk Storage Box, 10 Excellent Games, Mouse Mat, Mouse Bracket (Mouse Holder) Deluxe Paint.

£399.00 + £5.00 post and packing

AMIGA 500 PLUS DISK DRIVE

Instruction Manuals, Extra Disk, Workbench 1·3, The Very First Tutorial, T.V. Modulator, Photon Paint, Mouse **PLUS** additional Amiga Compatible Disk Drive and 10 Blank Disks.

£449.00 + £5.00 post and packing.

AMIGA 500 + 1084S STEREO/ COLOUR MONITOR

(including the Amiga 500 deal) **£649.00**
+ £10.00 post and packing

1084 HIGH RESOLUTION COLOUR MONITOR

1084S STEREO/COLOUR MONITOR

Compatible with PC, Amiga, C64c, C128

£259.00
+ £5.00 post and packing

MPS 1500C

MPS 1200P

MPS 1200P

£229.99
+ £5.00 post and packing

The Commodore MPS1200P printer presents the state of the art in dox matrix printers, with all the features of a printer that would cost much more. The MPS1200P is designed to be like three printers in one. It can act just like an Epson FX printer, or with the flip of a switch, it can act just like an IBM Graphics Printer with IBM Group II-I character set (Danish/Norwegian character set) support. It can also print all the characters available with the Amiga in the Amiga configuration. The MPS1200P is capable of all the printing functions you would expect, as well as some additional features you may not expect.

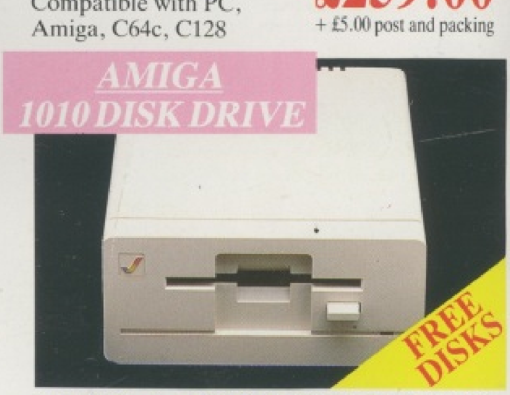
MPS 1500C COLOUR PRINTER

£199.99
+ £5.00 post and packing

A. TECHNICAL CHARACTERISTICS

PRINTING TECHNIQUE	Impact dot matrix (9-needle print head).
DRAFT MODE	– matrix: 9 vertical dots x (5 + 4) horizontal dots; – print speed: 120 char/s, at 10/char in
TABULATION SPEED	2 char/s
PRINTING DIRECTION	bi-directional, with optimised head movement
PRINT PITHES	10 char/in to 24/char/in programmable from line, and in SET-UP mode
LINE FEED	– 1/6in (4.23 mm), 1/8 (3.17 mm) and 7/72 in (2.4 mm); – n/216 in and n/72 in.
CHARACTER SET	ASCII characters and special characters.
MAX. PRINT LINE LENGTH	40 top 192 characters, according to print pitch selected.

AMIGA 1010 DISK DRIVE



AMIGA 1010 DISK DRIVE

Amiga 3.5" external drive. Capacity 880K

PLUS FREE DISK STORAGE BOX & 10 BLANK DISKS

£149.99
+ £5.00 post and packing

A501 RAM PACK

512K for the Amiga

£149.99
+ £5.00 post and packing

. . . AND MORE BESIDES!

COMMODORE OLYMPIC PACK

THIS TOPICAL GAMES COMPENDIUM OFFERS A TRUE SPORTING CHALLENGE

Pack contains: C64c Computer 1530 Datasette, Quickshot Joystick, Matchpoint (Tennis), Snooker, World Championship Boxing, Daley Thompsons Supertest, Hypersports, Basketball, Matchday II, Daley Thompsons Decathlon, Basket Master, Track and Field.

PLUS POSTRONIX BONUS PACK OF £100 OF FREE SOFTWARE

£149.99
+ £5.00 post and packing

COMMODORE FAMILY ENTERTAINMENT

AN EXCELLENT PACK PROVIDING HOURS OF ENTERTAINMENT FOR ALL THE FAMILY

Pack includes: C64c Computer 1530 Data Cassette, Quickshot II Joystick, Personal Hi-Fi, Commodore Juke Box Audio Tape (10 Hits), Yamaha SHS10 FM Digital Keyboard with Midi, Ghostbuster, Rollaround, Tau Ceti, Agent X11, Surprise Game.

Plus: POSTRONIX BONUS PACK OF £100 OF FREE SOFTWARE

ONLY £199.99
+ £5.00 post and packing

1541 DISK DRVE PACK

1541 II DISK DRIVE PACK

Pack includes:
1541 II Disk Drive, 10 Excellent Disk Games, 20 Blank Disks, 5¼" Diskette Storage Box. AND GEOS!

£169.99
+ £5.00 post and packing

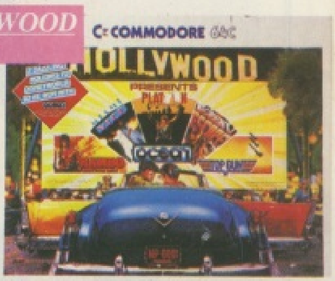
THE HOLLYWOOD PACK

A GREAT DOUBLE THEME PACK OFFERING THE BEST OF HOLLYWOOD, PLUS A COMPENDIUM OF T.V. GAME SHOWS

Pack includes: C64c 1530 Data Cassette, Quickshot II Joystick, The Great Escape, Miami Vice, Platoon, Rambo, Top Gun, Every Second Counts, Blockbusters, Bullseye, Trivial Pursuit, Krypton Factor.

Plus: POSTRONIX BONUS PACK OF £100 OF FREE SOFTWARE

ONLY £149.99
+ £5.00 post and packing



COMMODORE ADD-ONS

A) 1750 RAM EXPANSION MODULE FOR CBM 128
Simply plug it into the expansion port on your CBM 128 and 512K Bytes of additional Ram are available.

B) 1351 COMMODORE MOUSE
The Commodre 1351 Mouse is controller designed for use wth the CBM 64/128.

C) 1764 RAM EXPANSION MODULE FOR COMMODORE 64
How do you get a total of 320K Ram on your 64, just plug in the 1764 Module.

A £149.99 B £19.99 C £99.99
All prices + £5.00 post and packing.

ICONTROLLER

ICONTROLLER

Icontroller is semi permanently mounted on your computer console. Icontroller leaves hands on the keyboard while executing Icon commands with your fingertips.

£15.99

SEIKOSHA PRINTER

SEIKOSHA PRINTER

Compatible with most makes of Commodore computers. Features variety of fonts including graphics and near letter quality, reverse printing, italics, tractor feed and paper seperator. Comes complete with serial cable.

£159.00
+ £5.00 post and packing

STARFIGHTER

Compatible with Sinclair Spectrum, Commodore. Atari Computers. Atari 2600 Video Games Systems.

£14.95

CHEETAH 125+

Compatible with Spectrum. Commodore. Atari 2600 Video System. Atari. Amstrad PC. Amstrad.

£8.95

SLIK STIK JOYSTICK CONTROLLER

Compatible with Atari Computers. Atari Games System. Commodore.

£6.99

RAM DELTA DELUXE MICROSWITCH JOYSTICK

Compatible with Atari computers and Video Games Machines. Amstrad PCW (with adaptor). Spectrum (with adaptor). Commodore.

£9.99

CHALLENGER DELUXE

Compatible with Spectrum (with optional interface). Commodore. Atari 2600 Video System. Atari Computers. Amstrad computers.

£4.99

TAC 5 CONTROLLER JOYSTICK

Compatible with Atari. Commodore.

£13.99

COMPETITION PRO 5000

Compatible with Commodore 64 and Vic 20. Sinclair ZX Spectrum (interface required).

£14.95

TAC 2 CONTROLLER JOYSTICK

Compatible with Commodore 64 and Vic 20. Atari Computers. Atari Game Systems.

£10.99

MICRO HANDLER MULTI FUNCTION JOYSTICK

Compatible with Commodore. Commodore C16/+4 (adaptor required). Atari.

£24.95

ONLY AVAILABLE FROM POSTRONIX LTD

A whole new range of innovative computer covers, made from durable clear plastic. Designed to fit your computer perfectly … not only safe from dust but also all forms of accidental damage.

C64 OLD STYLE	£6.99
C64C NEW STYLE	£7.99
AMIGA 500	£9.99
ATARI 520ST	£9.99
ATARI 1040ST	£9.99

LARGE STOCKS OF SOFTWARE & ACCESSORIES FOR ALL 16 BIT, 8 BIT COMPUTERS – ALSO ALL MAJOR GAME CONSOLES – PHONE (0604) 791771 NOW WITH YOUR REQUIREMENTS.

postronix

TITLE (TICK) ☐ MR. ☐ MRS. ☐ MISS
INITIALS
SURNAME
ADDRESS
POST CODE
CUSTOMER NO (IF KNOWN)

SEND YOUR ORDER TO:

POSTRONIX
NENE ENTERPRISE CENTRE
FREEHOLD STREET
NORTHAMPTON NN2 6EW

OR PHONE 0604 791771
24 HOUR ORDER SERVICE

ALL SOFTWARE ITEMS ARE INCLUSIVE OF P/P. ALL HARDWARE ITEMS ARE £5.00.
FOR NEXT DAY DELIVERY £10.00 P/P (CREDIT CARD & CASH ORDERS ONLY).

AC/DBNOV

CATALOGUE ITEM NO.	DESCRIPTION	ITEM PRICE	QTY	TOTAL PRICE

IF YOU REQUIRE A FREE CATALOGUE PLEASE TICK ☐

PLEASE DEBIT MY CREDIT CARD

SIGNATURE ______________________ DATE ______________________

(CARD HOLDERS PLEASE STATE EXPIRY DATE)

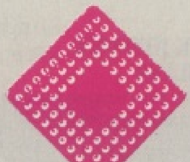
OR
ENCLOSE CHEQUE/ POSTAL ORDER FOR £
CHEQUE PAYABLE TO POSTRONIX

SEE NOTE

TOTAL GOODS
POSTAGE & PACKING
GRAND TOTAL

OFFER APPLIES TO U.K. ONLY. OVERSEAS ORDERS CHARGED AT OVERSEAS RATE.

Inside



transputers the size of a postage stamp

COMMODORE
COMPUTING
INTERNATIONAL

JULY 1989 Volume 7 No. 11

CCI View 6
Managing Editor Antony Jacobson's outlook on life, Commodore and the universe

News 8,10,12,14,15
Five product and happening packed pages for your perusal.

Disk Drive Competition 16
Win an Oceanic disk drive — or two!

Transputer 18,19,20,21
Taking the load off overworked processors, transputers the size of a postage stamp are here in force.

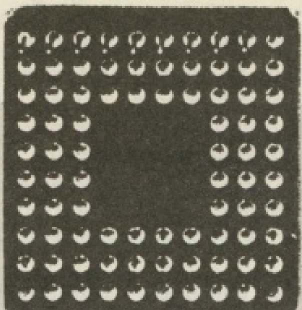
Disk Disector 22,23
If you like to delve a little deeper into your disk's internals than listing a directory, Disk Disector is just the ticket.

Phillips Monitor 24
Crackly sound? Fuzzy pixels? Sounds like you need a new monitor.

Rainbird Flies Again 26,27
Tony Rainbird goes into club mode

More 64 Power 28,29,30
Yet more power from that little box of chips they call the C64.

The Primary Project 32
Commodore moves into the classroom.



Transputer ... *here in force.*

Microprose takes on Telecomsoft 36
One of today's fastest-growing software houses goes big league.

Back To Basics 37,38,39
The latest installment in this beginner's guide to BASIC.

Role Playing Games 46,47
Peter Gerrard's continuing saga of how to play the role.

Technical Letters 53,54
With the info on the intricacies, Jack Cohen answers your questions.

Books 55,56
Hard copy softened up by CCI critics

The Muncher 58,59
Godzilla goes on the rampage to reclaim stolen eggs, but where are the Chewits?

Bargain Bucket 60,61
Cheap and cheerful or cheap and nasty? Bargain Bucket is the place to find out.

Charts 62
Can Robocop hold out for another month at the top?

Horgan's Hints 63
This month's selection includes piles of 64 pokes and a cheat mode for Amiga Outrun.

Opinion 64
John Cook, computer journalist and game designer speaks his mind.

Jordan vs Bird One On One 68
Slam dunk your giner nuts with Electronic Arts' basketball simulation.

Adventure 69,70,71,72
Andy Moss examines all in the adventure world.

Forgotten Worlds Preview 74,75
US Gold's stunning conversion of Capcom's venture into the land that time forgot.

The Real Ghostbusters 76,79
The computer game of the cartoon, doll, flamethrower ...

Command Performance 78,79
US Gold compile a mixed bag of yesterday's software.

Demon's Winter 80,81
More role-playing rambles in SSI's latest.

Street Sports Football 82,83
Epyx throw razamatazz to the wind with a good old back-street ball game.

Competition 84
Win an Oceanic Disk Drive

Programs 85,86,87,88,92,93,94
Brush down the keyboard and limber up for this month's selection of listings.

Stormlord 90
Hewson's new arcade adventure

Classifieds 96

CCI View

Dear CCI Reader,

In this month's CCI we have a major investigation into the Transputer. "What has that got to do with my C64". Some readers may ask. The answer is that in CCI, we don't only like to look at what is happening now, the present, but also what will happen, the future as it affects computing, especially Commodore computing. In our view the Transputer will be one of those factors that will influence a growing area of computer activity. Commodore alredy plans to sell a transputer-based Amiga later this year. Of course, the present costs of computers using transputers is far beyond what the average CCI reader would be able to afford, but electronic industry prices fall with astonishing rapidity and technological progress spreads very quickly. So we thought it both interesting and relevant to take a close look at this exciting development.

Technological progress is also very noticable in CCI's C64 Game of the Month Stormlord from the Andrew Hewson stable. Andrew has been called the King of the Shoot 'em Ups and he goes on producing games of outstanding quality. Both he and another well-known personality in the software world, Tony Rainbird, just read somewhat wryly a further major story we report: the takeover by MicroProse of Telecomsoft.

Andrew Hewson's company was recently involved in litigation with Telecomsoft when Hewson disputed the right of Telecomsoft to sign up the leading programmers which his company used. The case was settled but judging from the brilliance of the programming of Stormlord, Hewson's loss was not great, nor from the fate of Telecomsoft was its gain.

Tony Rainbird whose software clubs are covered in this CCI, left Telecomsoft, with one of its major labels still bearing his name, from among other things, he says frustration at its bureaucracy, can hardly be too upset at his erstwhile employers demise.

In this CCI we also cover a game about to be released by yet another major force in international software, U.S. Gold. Forgotten Worlds is hailed as U.S. Gold's best game in ages. For some time the Birmingham-company has been not at its best and it is good to see it producing outstanding software again.

This issue of CCI is not however all about high technolgoy and software companies and their gossip-worthy goings on. We try to keep a balance for all interests and there is a fascinating article about a monitor that becomes a TV and even a story of a relative failure — Peter Gerrard unable to get inside his 64! Even CCI has its defeats. Now that's not something we report often!

Antony Jacobson

Antony H. Jacobson
Managing Editor and Publisher

COMMODORE COMPUTING INTERNATIONAL

Managing Editor and Publisher .... Antony Jacobson
Features Editor .... Antony Mael
Staff Writer .... Tony Horgan
Editorial Co-ordinator .... Nancy Picard
Consultant Art Editor .... Graham Baldock
Assistant Art Editor .... Rico Gusman
Production Controller .... Sandra Gallagher
Production Co-ordinator .... Lucya Szachnowski
Marketing Manager .... Max Jacobson
Senior Advertisement Manager .... James Mack
Advertisement Manager .... Billy Brown
Finance Director .... B.J. Lewis M.Sc. F.C.A.

Financial Controller .... Raj Kaushik
Contributors
.... Andy Eskelson
.... Andy Moss
.... Bob Collyer
.... Bud Vennos
.... Chris Wright
.... Dan Horgan
.... Daphne Moss
.... Jack Cohen
.... Jonathan Littlewood
.... Julia Forrester
.... Len Keighley
.... Mark Smiddy
.... Peter Gerrard
.... Peter Lee
.... Peter McDonald
.... Rainer Geller
.... Zak Mule Skinner

Competition Controller .... Teresa Geneve
Telephone 01-278 0333
Editorial ext: 274
Subscription ext: 274
Advertising ext: 280/286

Published by Croftward Limited
Finsbury Business Centre
40 Bowling Green Lane
London EC1R ONE

Distributed by Comag,
Tavistock Road, West Drayton,
Middx UB7 7QE

Printed by Chase Printers Group

Commodore Computing International – an independent magazine for Commodore computer users – is not connected in any way with Commodore Business Machines UK Ltd. It is published 12 times per year by Croftward Limited. The publishers do not accept liability for any incorrect statements or errors contained in material from independent sources or authors which may be reproduced from time to time.

© Croftward Limited 1989

ADVERTISERS DIRECTORY

ICPUG	31
Insight Software	Magenta Pages
Intermediates	42
Kingsway Computer	Magenta Pages
Lan	49
Megaland	66, 67
Microprose Midland Computers	Magenta Pages
Omnidale	Magenta Pages
Perfect Promotions	Magenta Pages
Postronics	IFC, 3
Rainbow Arts	65, 66
Silica Shop	IBC
Software Club	Magenta Pages
Tanglewood Software	38
Technology City	Magenta Pages
Trilogic	31
Ace	Magenta Pages
Adrians Arcade	Magenta Pages
Athene Consultants	Magenta Pages
Audiogenic	OBC
Best UK	38
Bulletin Board	Magenta Pages
DB Electronics	Magenta Pages
Datel Electronics	41, 42, 43
Delta Pi	31
Diamond Computer Systems	9
Digital Integration	17
Dimension	9
Evesham Micros	13
Exmouth Micros	Magenta Pages
FSSL	7
First Micro	57
Future Place Computers	73
Harwood Computers	34, 35
Hindley Electronics	Magenta Pages

F.S.S.L.

FINANCIAL · SYSTEMS · SOFTWARE · LIMITED

RENEGADE The leading American disk back-up/utility package is now available in the UK. The World's most powerful disk back-up package! We are sure that Renegade is the most powerful & the easiest to use package of it's kind. Renegade automatically detects the protection method used, autoselects the required copier and copies the disk & all this within seconds.

SOME OF THE FEATURES:

- ⭑ Single or dual state of the art Nibbler
- ⭑ Single or dual high speed data copier
- ⭑ 1541/71/81 Fast file copier — any direction
- ⭑ GEOS module, copy all GEOS software
- ⭑ GEOS file copier — works under desktop
- ⭑ Error Scanner with unique sector editor
- ⭑ GCR Editor for the experienced hacker
- ⭑ Scrolling M/L monitor with drive monitor
- ⭑ Capable of copying Rapidlok protection
- ⭑ Byte Pattern Search for high speed searches
- ⭑ For 64/128 1541/71/81 & compatible drives
- ⭑ Perfect for 128 users, copies full 1571 disks
- ⭑ 350+ Parameters for those tough programs
- ⭑ Dump Parameter catalogue to printer
- ⭑ Exclusive — subscriber service for updates
- ⭑ Full technical support — of course

The specification & support are impressive, the speed incredible, back-up heavily protected disks in under 60 seconds. Renegade includes over 300 parameters, more than any other similar product on the market and additional parameters are released every two months! Also Renegade is updated three times a year to ensure that Renegade will always be a step ahead of anything else on the market.

Nothing can stop you from taking total control of your software. Renegade gives you the most advanced back-up tools on the market for one remarkably low price & unlike some companies that claim utilities unlimited in power, Renegade is produced by a company that knows that the customer is our most valuable asset. Renegade **£24.95**

JIFFY DOS

Jiffy DOS is an enhancement disk operating system that finally gives your Commodore computer the disk-access speed it has always needed. Programmed onto two ROMs that replace the Kernal ROM in your computer & the DOS ROM in your disk drive, Jiffy DOS provides features that no other product can match. Jiffy DOS is compatible with the majority of commercial software & hardware & includes the latest ROM updates from Commodore. 128 users enjoy fast disk access in both 64 & 128 modes.

Jiffy DOS is available for all these machines: C-64, 64C, SX-64, C128 & C128D Computers. 1541, 1541C, 1541-II, 1571, 1581, FSD-1, Blue Chip, Excelerator +, Excel 2001, Master 41 & Oceanic compatible disk drives

Fitting is simple, unplug the old ROMs & plug in Jiffy DOS. A small on/off switch is fitted through the computer case. No soldering is usually required.

FEATURES INCLUDE:

- ⭑ Speeds up all disk operations
- ⭑ Works with virtually all software & hardware
- ⭑ Can be totally switched out — if necessary
- ⭑ Easy to install, uses no extra cabling or ports
- ⭑ All disks are 100% compatible
- ⭑ Does not bypass important error checking
- ⭑ Built-in DOS wedge with over 20 commands
- ⭑ 15x Faster loading Program files
- ⭑ 4x Faster saving Program files
- ⭑ 7x Faster loading Sequential files
- ⭑ 4x Faster saving Sequential files
- ⭑ 4x Faster loading Relative files
- ⭑ Access command channel 5 times faster
- ⭑ E.G. Load 202 blocks in 12 seconds

- Jiffy DOS 64 or 128 Only **£59.95**
- Jiffy DOS Computer ROM Only **£34.95**
- Each additional drive ROM **£24.95**

Please specify Computer and Drive

GEOS v2.0

The Graphic Environment Operating System for the 64 & 128.

If your productivity programs don't relate to each other, it's time to consider adopting GEOS, the totally integrated software system. Like any good family, GEOS products work together & grow together. In fact, for every application you add, your capacity for production actually multiplies

⭑ A strong family resemblance.

All GEOS products work & look pretty much the same. Same menus, same icons, so once you learn how to point & click, you pretty much know how geoPublish, geoFile, geoCalc & every other family member works. GEOS family members freely swop date with one another, so importing text & graphics between programs is never a problem. Which means you spend more time creating stuff & less time deciphering all those other instruction manuals.

⭑ Marry into the family.

Now, when it comes to improving your looks, the best way is by marrying into our family. Because GEOS Text & Graphic Grabbers take your old data & convert it into GEOS format so that your C64 & 128 can deliver beautiful offspring. So if you would like your software to relate to each other, adopt the GEOS family.

THE GEOS FAMILY

GEOS v2. With WYSIWYG word processing, spell checking, mail merging, colour painting & support for all GEOS compatible applications.
GEOS 64 **£39.95** 128 **£49.95**

GEOChart. Give your numerical data visual impact with geoChart. 64 or 128 (40 col) **£19.95**

GEOPublish v2. A desktop publisher with a host of features for creating posters, newsletters, flyers and brochures. 64 or 128 (40 col) **£39.95**

DeskPack Plus. Six add-on programs, which includes Grabber, Icon Editor, geoDex & geoMerge. 64 or 128 **£24.95**

FontPack Plus. A collection of 53 fonts for use with any GEOS package. 64 or 128 **£19.95**

Becker BASIC. Write your own BASIC application programs under the GEOS system.64 **£39.95**

GEOSpell. Spell check your work or search for a word with a 28,000 word dictionary. 64 **£19.95**

GEOCalc. A versatile spreadsheet for home or business use. 64 **£29.95** *128* **£49.95**

GEOFile. Manage data & graphics simply and easily 64 **£29.95** *128* **£49.95**

GEOWrite Workshop. Special utilities for the professional writer, geoWrite v2.1, geoMerge and Text Grabber. 64 **£24.95** *128* **£39.95**

Commodore 1351 Mouse. **£29.95**

VIDEO TITLE SHOP 64

A new versatile product designed to enhance your home video productions. With this utility you can combine your VCR or video camera and computer to create specialized video productions for viewing at home, business or school. Title your videos with graphic screens, text and borders.

£19.95

PRINTSHOP 64

Now with a few keystrokes you can write, design and print like a commercial printshop. Produce greeting cards, stationery, signs, posters and large banners. Software, manual, coloured paper and envelopes included.

£29.95

PRINT n WEAR

Printout your latest creation onto this special paper and then iron the image onto your clothes. Ideal for most dotmatrix printers. 10 sheet pack.

£12.95

SPECTRUM 128

A deluxe paint program for the 128. Spectrum is a full featured paint program which uses 80 column display for 640x200 pixel resolution. Spectrum displays all 16 standard colours plus an additional 128 colours. Among its many features are air brush, erase, mirror, block fill or erase, pixel and colour editor. The Preference Manager allows you to draw objects on horizontal or vertical axis, shade objects and adjust the backlight to shadow objects, globally modify graphics and text. Spectrum includes a slideshow viewer and add-on disk which contains 27 new fonts. Requires 64K video RAM & Commodore 1351 mouse **£39.95**

DISK WHIZ 128

A powerful disk management package for the 128 & 1541/71/81 disk drive. Using the friendly desktop environment you can scratch, rename, erase, lock or unlock files, view data files direct to screen, create 1581 partitions and back-up disks and files. On screen help always available. **£4.95**

HOME DESIGNER 128

Home Designer is a sophisticated CAD package that allows you to create extremely detailed and accurate drawings at virtually any scale. With 50 powerful drawing commands, 5 drawing layers and full library figure support it is perfect for professional quality drawings, ideal for house plans, schematics, precision engineering design and home use. Being the only object based CAD package on the market, it is in a class of it's own. With bit-mapped packages when you enlarge an area you see fat dots, with Home Designer the resolution of the drawing is increased. Supports joystick, keyboard and mouse. **£34.95**

WRITING WITH VIZAWRITE CLASSIC

A new guide to writing with the classic word processor. Some of the many chapters include getting started, exploiting the glossary, disk indexing, changing headers & footers, laying-out your documents, how to use your printer, creating your own dictionary, writing with Viza-Write and much more. Includes a companion disk full of examples and information. **£9.95**

FREE 16 PAGE CATALOGUE

CALL OR WRITE

Prices include VAT & U.K. delivery. Add £1.25 per order for handling. Overseas orders send advertised price plus £2.00 for Airmail. Please send cheque, Postal Order or Credit Card details. VISA/ACCESS orders accepted by telephone. Callers & Trade orders welcome.

18 High Street · Pershore · Worcs · WR10 1BG · Tel: (0386) 553153

Commodore "dominates the high street"

Commodore tells us it has been moving forward in all of its product sectors on the consumer front.

The major chainstore group Allders has taken on Commodore's PC10 Series III machines on the strength of the Amiga 500's performance in their shops over Christmas. They will also be stocking Commodore's price-beating PC10 Series III bundle (which includes a dot matrix printer and reails for under £600).

Laskys will now be stocking the PC1, the C64 and the Amiga 500 in 32 of its stores. It will also be running the PC10 and PC20 Series III in six of its largest stores.

Last Christmas' major marketing and TV advertising campaigns for the Amiga 500 — which resulted in Commodore's best ever end of year period — has prompted the John Lewis group to stock the Amiga in 20 of its outlets. And the high-street multiple Tandy will be selling the Commodore 64 Hollywood Pack in every one of its UK stores.

The world-famous toy shop Hamleys — on London's Regent Street — will be selling both the C64 and the Amiga 500. Among the catalogue companies Grattens, Argus, and Littlewoods have decided to stock Commodore products.

Dean Barrett, Commodore Business Machines' Marketing Manager, commented: "These signings are, of course, great news for both Commodore and the shops stocking our products. We are particularly pleased to see the PCs attracting so much attention — we look set to give the other consumer PC manufacturers a hard time in the coming months".

Micronet Challenges Chancellor

The Government claims Micronet has taken the first step towards total taxation of the press by imposing VAT on the electronic computer magazine, Micronet.

The change in VAT status, announced at the time of the budget, means that residential consumers are now being charged VAT on news and features, and appear to be penalized because of the innovative way they are accessing the information.

"There is no excuse for this," commented David Rosenbaum, Micronet Product Manager. "Either the Government is preparing the ground for the general imposition of VAT on the press or they have made a serious error. We're taking a stand because we don't believe there should be a tax on information and we won't believe there should be different rules for electronic media."

A petition, collected electronically, and 'signed' by over 3000 Micronet members, has been presented to Nigel Lawson, the Chancellor of the Exchequer.

Despite the change in VAT status Micronet's annual tariff remains at the pre-VAT price of £79.95 until June 30th 1989. This includes a free GEC Datachat modem.

The petition to the residence of the Chancellor of the Exchequer

Mindware

Mindware International, Canadian developer of Amiga desktop presentation and animation software has announced **PageSync.** powerful new tool for creating sophisticated, timed interaction between Amiga-based graphics and professional quality audio, including MIDI.

PageSync allows external MIDI events and computer animation to control one another. Used in conjunction with a MIDI instrument, **PageSync** lets a computer animation advance, stop or reverse based upon signals generated by that MIDI instrument. For example, a MIDI drum machine could advance a computer animation by one frame per drum beat, keeping the animation in perfect time with the music.

PageSync could also do the opposite: an animation running on the Amiga could literally play a MIDI instrument while running the animation. In addition, **PageSync** will synchronize computer graphic events and digitized sound samples.

PageSync can be used in a diverse range of applications, including music, corporate sales presentations, training, animation and home video.

PageSync will also make it possible to integrate computer graphics and music with video, through the use of additional hardware. For example, anyone could make their own home music video by sending synchronized graphics and music to a standard video cassette recorder. In addition, live images from a video camera could be merged with graphics into a single picture using a genlock. This picture, along with a synchronized music, could then be directed to videotape.

PageSync costs $100.00 and will work in conjunction with two other Mindware products: **PageFlipper Plus F/X** and **PAGErender 3D.** Contact Mindware International, 33 Alliance Blvd., Unit 1, Barrie, Ontario L4M 5K2, CANADA, or call (705) 737-5998.

DIMENSION computers l.t.d.

40/50 High Street
Leicester LE1 5YN
Tel: (0533)
517479/621874

THE MIDLAND'S LARGEST COMPUTER STORE

AMIGA B2000 PACK
Amiga B2000 Computer, Commodore 1084S Monitor, PC/XT Bridgeboard, 20Mb Hard Disc .... **£1379.00 + VAT**

AMIGA BUSINESS PACK
- ★ Amiga A500 computer
- ★ 1084S High Resolution Colour Monitor
- ★ Citizen 120D printer
- ★ Monitor and printer cables
- ★ The works-integrated spreadsheet, wordprocessor and database
- ★ Transformer-PC Emulator **£799.00**

Amiga B2000 Computer	£1079.00
A500/2000 40Mb Hard Disc Auto Loads from 1.2 or 1.3 Workbench	£599.95
Trilogic Audio Digitiser, Stereo	£34.95
Cumana 1Mb A500 3.5" External Drive	£89.95
Amiga Power Supply Unit	£59.95
Internal A2000 2nd Drive	£79.95
Amiga Midi Interface	£34.95
Digiview Colour Digitiser	£139.95
Supra 30Mb A500 Hard Disc	£699.00
2Mb Internal RAM Expansion	£449.00
PAL Genlock A500/A2000	£219.95
A500 512K RAM Upgrade	£129.95

AMIGA RANGE

AMIGA A500 PACK 1
with Mouse, Workbench, Basic and TV Modulator **£339.00**

AMIGA A500 PACK 2
with Mouse, Workbench, Basic, TV Modulator, Formula 1, Footman, Viper, Mousetrap and Plutos **£359.00**

AMIGA A500 PACK 3
with Mouse, Workbench, Basic, Photon Paint, TV Modulator, plus SUPERBASE Database **£379.00**

PHILIPS 8833 STEREO MONITOR	£209.00
COMMODORE 1084S STEREO MONITOR	£219.00

TRILOGIC AUDIO DIGITISER
Digitises sound from any source **£27.95**

MINIGEN VCR Graphic Overlay System
Superimposes graphics onto VCR input **£99.95**

AMIGA A500 plus
PHILLIPS 8833 STEREO MONITOR **£539.00**

AMIGA A500 plus
COMMODORE 1084 MONITOR . **£549.00**

STAR LC10 COLOUR DOT MATRIX
- ✶ 120 cps Draft, 30 cps NLQ
- ✶ 6 Resident Fonts and 6 Print Pitches
- ✶ Draft and NLQ in all Fonts and Colours
- ✶ 7 Colours plus Multiple Shade Graphics

Includes AMIGA Printer Lead **£239.00**

PHOTON PAINT
The AMIGA's most powerful graphics pack **£69.95**

AMIGA SUPERBASE PERSONAL DATABASE
- ✶ Extremely powerful yet easy to use
- ✶ Flexible File Structure and Definition
- ✶ Powerful Report Generator
- ✶ Over 150,000 users .... ~~£59.95~~ **£39.95**

BBC EMULATOR
Emulates BBC Basic — also works within Amiga Multitasking Operating System **£44.95**

STAR LC10 DOT MATRIX PRINTER
- ★ 120 cps Draft, 30 cps NLQ
- ★ Friction and Tractor Feed
- ★ Paper Parking Facility
- ★ 6 Resident Fonts and 6 Different Print Pitches

Selectable from Front Mode Select Panel

Commodore Serial or Centronics	£179.00
Commodore 64/128 Colour Version	£239.00

THE NEW 1541 II DISC DRIVE	£159.95
OCEANIC OC 118N Commodore Compatible Disc Drive	£129.95

Both include: **Software Pack** 28 Disc-Based Games

PHILIPS TV TUNER
Turn your colour monitor into a high quality TV receiver.
Works with 8833/1084, etc. **£59.95**

MPS 803 TRACTOR FEED UNIT	£29.95
CBM 64 POWER SUPPLY UNIT	£19.95
COMPOSER/EDITOR SOFTWARE For Music Expansion System, Tape or Disc	£24.95
ACTION REPLAY Mk 5 PRO Tape to Disc Back-up Cartridge	£34.95
NEOS MOUSE With CHEESE Software, Tape or Disc	£24.95
COMMODORE C2N DATA RECORDER	£29.95
HANDIC DIARY With Label Printer, Cartridge	£9.95
MUSIC MAKER 128 Keyboard and Software, Tape	£9.95
LOGO 64 Programming Language, Disc	£9.95
PRACTICALC 64 CBM 64 Spreadsheet, Tape	£9.95
CBM64 PROGRAMMERS REFERENCE GUIDE	£4.95

PRINTER RIBBON OFFER

MPS 801, 802, Citizen 120D and Star NL10 Ribbons	£5.95
MPS 803 & MPS 1000	£4.95
DPS 1101 Multi Strike	£3.50

BUY FOUR AND GET ONE FREE!

NEW GEOS V2.0
Features include:
★ NEW Geowrite 2.1 ★ Geomerge Mail Merge
★ Text Grabber Text Import ★ NEW Geospell Spellchecker ★ Enhanced Desktop
CBM 64 .... **£39.95** CBM 128 .... **£49.95**
For a limited period, either package includes FREE ICONTROLLER

GEOCALC 64 Spreadsheet	£26.95
GEOCALC 128	£44.95
GEOPUBLISH 64 Desktop Publisher	£34.95
GEOPUBLISH 128	£34.95
GEOWRITE WORKSHOP 64	£26.95
GEOWRITE WORKSHOP 128	£44.95
GEOFILE 64 Database	£26.95
GEOFILE 128	£44.95
GEOSPELL	£16.95
GEO DESKPACK PLUS 64/128	£21.95
GEO FONT PACK PLUS 64/128	£16.95
GEO PROGRAMMER	£44.95
ICONTROLLER Geos-compatible Joystick. Fits onto keyboard.	£12.95

CITIZEN 120D DOT MATRIX PRINTER

Commodore version (with 64/128 Printer Lead)	£134.95
Centronics version (with AMIGA Printer Lead)	£134.95

Commodore PC1 with Mono Monitor	£299.00 + VAT
Commodore PC1 with Colour Monitor	£449.00 + VAT
PC1 EXPANSION BOX With 3 Expansion Slots	£99.00 + VAT
EXPANSION BOX with 20Mb HARD DISC	£299.00 + VAT

LOAD-IT
CBM 64/128 ADJUSTABLE DATA RECORDER
Head adjustment control plus alightment LED assures perfect head/signal alignment **£37.95**

CBM64 YAMAHA PACK
Commodore 64, C2N Data Recorder, 30 Games Pack, Bush Walkman plus YAMAHA SHS10 MIDI COMPATIBLE KEYBOARD **£179.00**

CBM64 HOLLYWOOD PACK
Commodore 64, C2N Data Recorder, Quickshot 2 Joystick, 5 Hollywood Games, 5 TV Quiz Games, plus 25 Arcade Games **£149.95**

CBM 64 OLYMPIC PACK
Commodore 64, C2N Data Recorder, Quickshot 2 Joystick, 10 Sports Games plus 25 Arcade Games **£149.95**

COMMODORE 1351 MOUSE
Compatible with GEOS plus all GEOS Utilities.
Can also be used as Joystick **£22.95**

PRECISION

Superscript 64	£24.95
Superbase 64	£24.95
Superscript 64 & Superbase 64	£44.95
Superscript 128	£29.95
Superbase 128	£29.95
Superscript 128 & Superbase 128	£54.95
Superbase, The Book	£11.95

CBM 64/128 and PLUS 4 COMPANIES PACK
Sales/Purchase/Nominal Ledgers with Invoicing and Stock Control, Disc **£24.95**

PERSONAL CALLERS AND EXPORT ENQUIRIES WELCOME
ALL OFFERS STRICTLY SUBJECT TO AVAILABILITY
ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE
ALL PRICES INCLUDE VAT UNLESS OTHERWISE STATED

To order, either send cheque/P.O. with coupon or ring **(0533) 517479/21874** with Access/Barclaycard number. Please allow 7 working days for delivery from receipt of order or cheque clearance.
Please add £1.00 towards carriage and packing on any software order.
Hardware orders add £1.00 under £65.00 value, and £5.00 over £65.00 value.
Printer orders add £5.00 towards carriage.

Send to: Dept. No. CC 17, Dimension Computers Ltd.,
40/50 High Street, Leicester LE1 5YN.
Tel: (0533) 517479/621874 Fax: (0533) 511638

Item	Quantity	Price
....	....	....
....		
....	Total	....

Name..

Address...

....

Telephone:...

More CBM News

MS-DOS PCs Commodore will shortly be introducing a small footprint, highly specified, EGA, 20Mb '286 PC30 at a normal retail price of around £1000. This will be followed later in the year by the release of the PC50 — a competitive 386 machine. The PC10 Series III bundle (which includes a dot matrix printer and costs under £600) has been very well received with major chainstores such as Laskeys and Allders deciding to stock it. Dealers have also reported a high level of consumer interest.

Amigas
The Amiga 2500's release date has yet to be confirmed — it is straight upgrade from the existing A2000 machine, it includes a 14Mhz 68020 CPU (upgradable to 25Mhz with 68881 or 68882 Math coprocessor) and up to 4Mb of 32bit RAM. The A2500 UX (which runs Unix and has been greeted by a high level of interest frmo end-users) was first shown at this year's Which Computer? Exhibition. Commodore also exhibited the Transputer for the Amiga 2000 and the A590 expansion box that includes a 20Mb autobboting hard disk and up to 2Mb RAM. Another interesting fact is that over one million Amigas have now been sold worldwide — 60% of them in Europe.

BBC Emulator
Sales of the BBC Emulator have just gone over the one thousand mark. It has received a good deal of praise for the quality of its emulation.

National Union of Students
Following Commodore's agreement with the NUS that resulted in Commodore's products being offered through Midland Bank's student finance scheme to all the union's members at preferential prices. Commodore is pleased the scheme has been a notable success with sales of both Amigas and PCs growing month by month (Contact: Ken Spencer 04574-68003).

Joint Projects
A lecturer from Norfolk College has just finished a project entitled "Textile Designing on the Amiga". As a result of the success of this venture Commodore is looking for more joint-project work in the education sector. The company is now calling for requests from individuals in education who have serious proposals for joint-projects. (Joint-project ideas should be mailed to Peter Talbot, Nationala Sales Manager for Education, at Commodore House, The Switchback, Gardner Road, Maidenhead, Berkshire SJ6 7XA).

The Primary Project
The beginning of January saw the start of a pilot scheme called The Primary Project with the purpose of evaluating the Amiga and related software in the classroom environment; to find out how Primary School children related to the Amiga 500; and to assess how the computer can be blended with the National Curriculum. The counties involved are: Somerset, Norfolk, Humberside, Berkshire and Cheshire.

Reports on the initial findings of The Primary Project will be available in the next two weeks.

CD Menaces Online

The online information undustry in North America is under threat from the massive growth of CD-Roms, according to a report from Information Markets Indicators.

Martha Williams, president of IMI, said: "CD-Rom is eroding the revenues of online databases the way online retrieval eroded sales of the corresponding printed resources. We are finding, particularly in the academic market, that CD-Rom is replacing online media."

The survey reports that 80% of universities have installed CD-Roms, with users acquiring 3.23 titles at an average of $3,000 each.

Although searchable CD-Rom databases have only been available for four years, the survey of 257 major users of online services found that 47% are using one or more CD-Rom titles. "The penetration of the online marketplace among large users outside academia appears to be about 30%," said Williams.

The survey, *CD-Rom's Impact on the Database Industry*, is available from Learned Information and costs £450.

Blue Ribbon Evens the Odds!

Do you enjoy an occasional flutter? Do you get frustrated when you back a loser? Do you wish you could beat the bookies more frequently? (Don't you wish people wrote less questioning press releases?) Here's your chance to even the odds with **Turf-Form**, the latest release from **Blue Ribbon Software.**

Turf-Form is a horse racing forecaster that can help predict Form for both Flat and National Hunt races on UK racecourses, so Blue Ribbon claims giving you a better chance come Derby Day, or even the Grand National. (Wanna bet?)

Using Form data **Turf-Form** utilizes an accurate prediction routine to produce both speed and fitness ratings for each horse you input, giving the horse's chances of victory on the course chosen.

Turf-Form is available for the C64 and (hooray!) the C16/+4 price £2.99.

High Steel

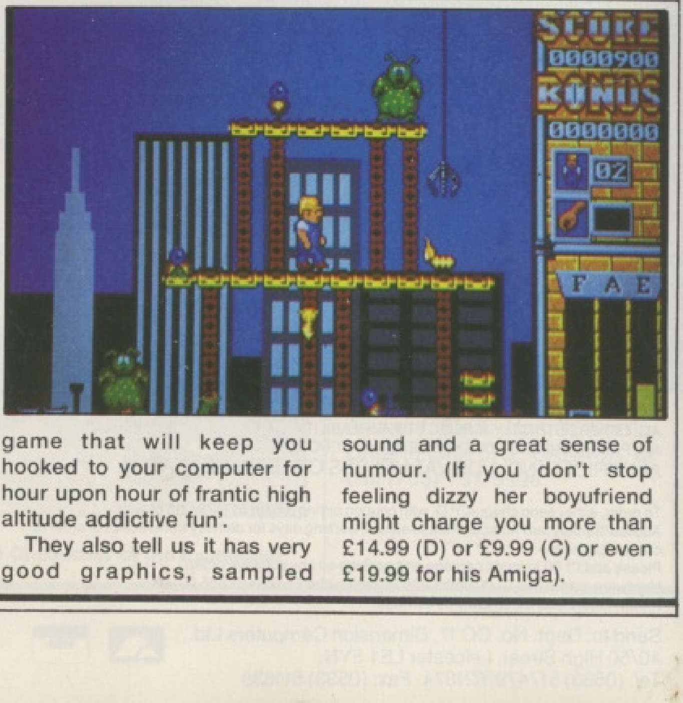
This is no time to feel dizzy. (I beg your pardon, I never touched her! Ed) As you balance precariously on a narrow steel girder, hundreds of feet above the hard concrete below, a head for heights is a must. There's a skyscraper to be built, (Does Ian Stewart know about this?), and the Spitters, Crawlers and metal-munching Gremlins are in hot pursuit. You step over the slippery remains of your workmates' lunch, hurl your spanner at a menacing shadow, and curse the day you became a high steel worker.

The sixth floor is complete. The huge crane delivers the next girder, just as a brick smashes into your hard hat. Things might not be so bad if you could just find your sandwiches. (Keep them away from the Spitters! Yuk!)

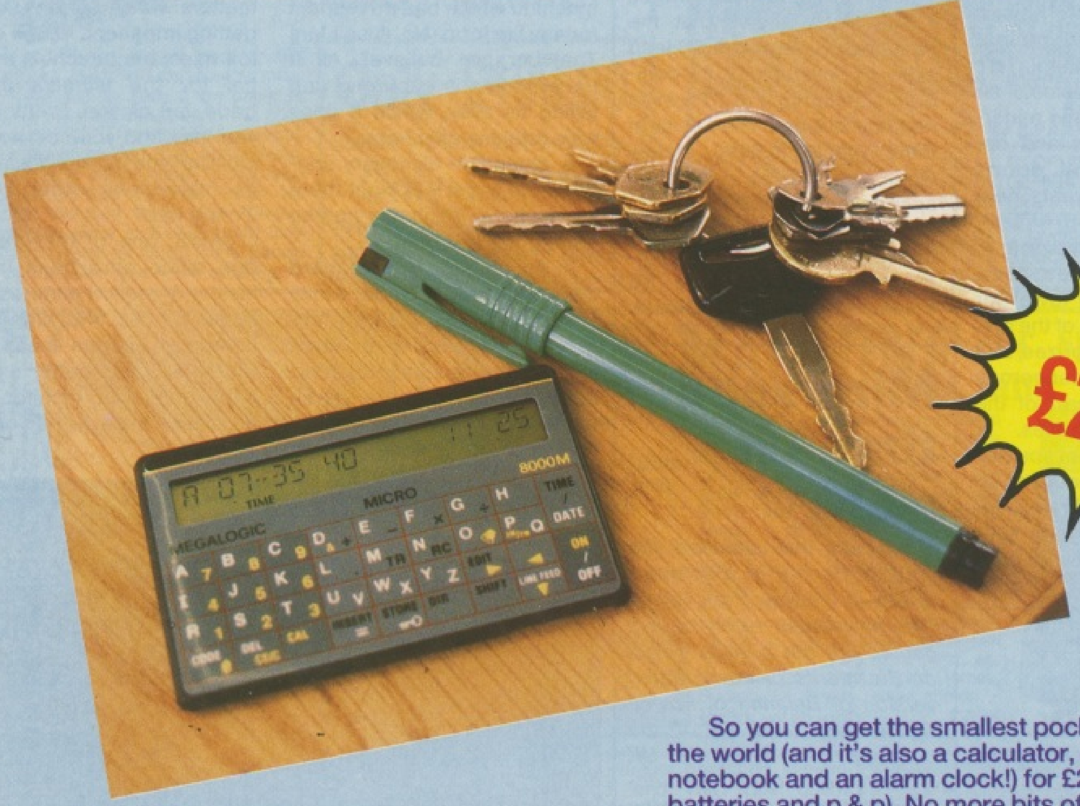
Can you overcome all obstacles and dangers confronting you to tower above the city streets below, or will you end up splatting the pavement like raspberry jam? (And the sandwiches?)

Screen 7 claim High Steel is 'a completely original arcade game that will keep you hooked to your computer for hour upon hour of frantic high altitude addictive fun'.

They also tell us it has very good graphics, sampled sound and a great sense of humour. (If you don't stop feeling dizzy her boyufriend might charge you more than £14.99 (D) or £9.99 (C) or even £19.99 for his Amiga).



"The SMALLEST pocket computer in the world"



ONLY £22.95

Keep your whole address book and lots more vital information on a computer just credit card size! Make sure that phone numbers, addresses, dates and other information you need are always at your fingertips with the DataStar 8000M Electronic Notebook.

This mini-miracle – yes, it *is* no bigger than your cheque or credit card! – lets you store up to 8k of information. It even has a special code to keep your data absolutely private. Megalogic, its manufacturer, tells us that the 8000M is the smallest pocket computer in the world! The 8000M may be very small, but it's also very powerful, with a 20-digit alphanumeric display and 7951 characters for programming.

The recommended retail price for the DataStar 8000M is £24.95. However, through this special offer, you can buy it for only £22.95 – saving more than 10%, and postage and packing is FREE!

So you can get the smallest pocket computer in the world (and it's also a calculator, electronic notebook and an alarm clock!) for £22.95 (including batteries and p & p). No more bits of paper, with the DataStar 8000M, wherever you go, you'll have bytes of vital information right in the palm of your hand.

Commodore Computing International
40 Bowling Green Lane, London EC1R 0NE

Please send me ☐ DataStar 8000M Electronic Notebook(s) at the special price of £22.95 including VAT and p&p.

Please make cheques payable to Croftward Ltd., or debit my Visa ☐ or Access ☐ Card No (indicate the account by marking the appropriate box):

☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

Signature...Exp. date..........................

Name..

Address...

....

Please allow 28 days for delivery C9072

Dialcom's Four

Dialcom have launched four new magazines on Prestel/ Micronet.

Newsday Magazine – headline news, special features, small business news, 24 hour weather and intelligent informed comment on the issues of the day – continuously updated throughout the day.

Look! Magazine – packed with information to help you get the most out of your leisure time with health, food and wine features, wide and varied Arts coverage and much more.

SportsEye Magazine – features and results on major sports nationally and internationally – a must for players and armchair enthusiasts alike, covering major and minority interest activities and details of many local sports associations and events near you.

Games City Magazine – the ultimate games metropolis, featuring IQ tower for great minds, the end of the pier for fun, quizzes and prizes, and down through the dangerous alleyways in the heart of the City to the land of Shades.

Dialcom tells us that you just log on to page 1: access to all four magazines is already included in your current subscription! (If you have a subscription, that is!)

Clearer Laptops

The poor resolution of laptop screens may soon be a thing of the past. Chips & Technologies has developed the 82C455 VGA Flat Panel CRT Controller which the firm claim is the missing link between the VGA graphics standard and 640 by 480 resolution flat panels. The controller can drive LCD, gas plasma, electroluminescent and CRT displays and provides four, eight and 16 levels of grey scaling with no flicker.

A smart map function provides intelligent colour to grey scale conversion, ensuring colour legibility on monochrome flat panels in text mode. Internal compensation schemes stretch display sizes to fill available screen areas, while built-in colour support provides for the arrival of colour LCD display technology.

According to Mike Swavely, vice president of sales and marketing at Compaq, the first colour laptops will come out in the next 12 to 24 months although prototype LCDs on laptops were recently shown by Sharp, NEC, IBM and Toshiba.

U.S. spends more

The European Community lags far behind the US in public spending on computers, according to a recent study.

The study was carried out by market researcher Eurostrategies and the organisers of France's Sicob 1989 trade fair.

It shows that annual computer spending by EC public administrations totals US$7bn – 0.57% of average national budgets – compared to estimated US spending of $20bn – 1.6% of the national budget.

The study shows that the Netherlands takes the EC lead with an investment in computers amounting to 1.7% of its national budget. The UK is in third place (0.68%) below Greece (1.52%). Belgium spends least, at 0.2%.

According to the report, there are only 76,500 computer specialists in the EC compared to 102,000 in the US.

Mindscape times it right

Mindscape has attained the unusual honour of a software review in the New York Times. This newspaper rarely covers games but ran a large article on the merits of the updated version of Balance of Power. Trying very hard not to be outdone, Mindscape's UK management team has apparently been seen offering copies of the game around The Times and The Guardian's and other distinguished editorial departments ... Even CCI's!

Jaws bites back

The box office smash hit film of the 1970's is soon to be available for the small screen of the home computer.

The terrifying epic which captured the attention of the public with its no holds barred, fearful tale of a killer great white shark is the first release of a brand new software company SCREEN 7. (Though among the developers you will recognise a certain David Martin of Martech as its boss.)

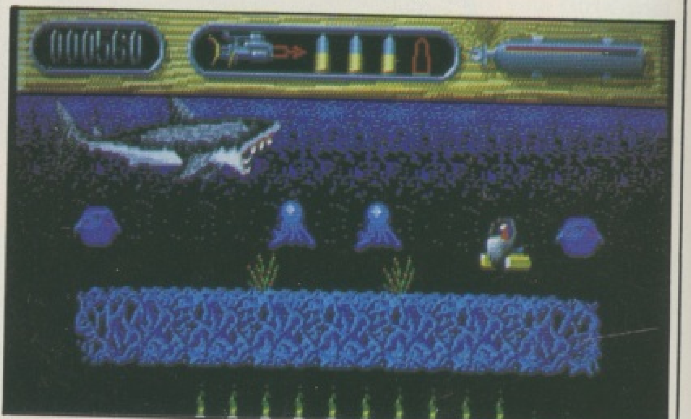
JAWS, the computer game, plunges you into a desperate fight against the evil of a killing machine which has no respect for any life form (No, it isn't Mrs Thatcher, we believe). All it understands is capturing and killing its prey, which it does with ruthless efficiency.

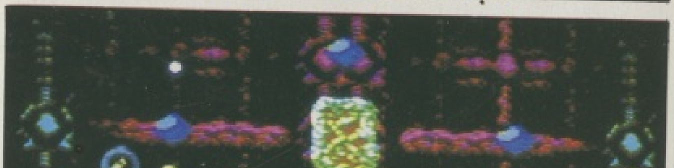
A gruesome discovery confirms the worst – it's out there somewhere. (Probably lurking among the programs!)

In an attempt to safeguard their vital tourist trade, Amity Island's Mayor Vaughn engages a professional shark killer from the mainland. Unfortunately, en route, a fierce storm wrecks his boat, and the means of JAWS' destruction is scattered throughout the caves and chasms of a menancing sea world. In desperation, Mayor Vaugn turns to you, Police Chief Brody. With your two colleagues, Hooper, the shark expert, and Quint, the manic shark hunter, you set off to retrieve the lethal weapons from the sea bed and kill the unwelcome intruder. Unfortunately, JAWS has other ideas.

Whilst JAWS roams the clear water bringing a swift and horrible end to unwary swimmers, you must undertake hazardous deep sea dives into a world teeming with hostile life and full of unforeseen dangers. To make matters worse, Major Vaugn is getting impatient. As the death toll rises, the beaches, essential for the island's tourist trade, get closed. Pretty soon, you may find yourself out of a job. Can you rid Amity Island of its malevolent visitor before it's too late?

JAWS, one of the greatest box office attractions in the history of motion pictures, surfaces for the first time on a computer screen near you. (Perhaps you'd better sit well back from your monitor. And no, Jaws' mate is not named 'Nadia').





A
Now
price
adva
facili
rang
tions
witho
7-col
also
LC10
or as
state
G
T
SLI
'
C
£1
J
DOU
every
Requ
easy
ICON
ted
applic
DATA
as C
contr
25 b
sleev
Good
25 d
50 c
25 d
but w
50 c
for 5
100

Evesham Micros

All prices include VAT/delivery

star LC-10 Best-selling CBM ready printer

Now the established market leader in this price category, the LC-10 incorporates many advanced features for such a low price. Its facilities, not normally available in this price range, include 4 NLQ fonts (with 96 combinations) and paper parking (use single sheets without removing tractor paper). Good value 7-colour version also available, which will also accept standard LC10 black ribbons. LC10 available either in '64/128 ready form or as parallel version for Amiga users. Please state your computer type when ordering.

Only £199.00

Colour version also available,

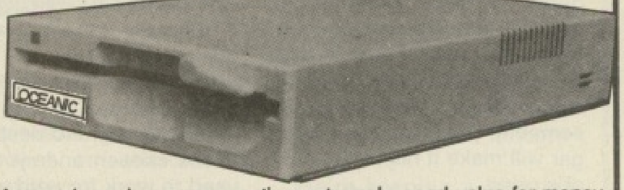
Only £249.00

Prices include two extra black ribbons free of charge

OCEANIC OC-118

NOW WITH NEW 'JIFFY DOS' !

Previously sold as 'Excelerator Plus'



A superb package representing extremely good value for money, combining the Oceanic OC-118 disk drive (previously sold as 'Excelerator+') and the sophisticated GEOS system. Said by COMPUTE's Gazette to have "dramatic improvements over the 1541 in quality and reliability", the drive is a stylish and attractive compact unit featuring a direct drive motor and its own external power supply. GEOS brings the power of a graphic interface and integrated disk turbo to your '64 and includes geoPAINT, a graphic workshop, geoWRITE, a WYSIWIG word processor and many Desk Accessories. Many more extensions available - see below.

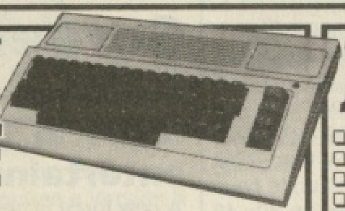
Oceanic OC-118 & GEOS £129.95

Oceanic OC-118 & GEOS plus *Freeze Machine* £149.95

GEOS Applications

GEOS 64 VERSION 2.0	£32.95	GEOPUBLISH 64/128	£32.95
GEOFILE	£24.95	GEOPROGRAMMER	£32.95
GEOCALC	£24.95	GEOS 128 VERSION 2.0	£39.95
DESKPACK+ 64/128	£21.95	GEOWRITE WORKSHOP 128	£32.95
GEOWRITE WORKSHOP	£24.95	GEOCALC 128	£32.95
FONTPACK+ 64/128	£16.95	GEOFILE 128	£32.95
GEOSPELL	£16.95		

GET THE SLIMLINE '64



Your '64 could look like this! Why put up with an old fashioned looking computer? Fit this smart and modern looking new case to your '64 - it will look and feel like you are using a brand new computer. This high quality injection moulded case is simple to fit and gives a lower keyboard height. Reject the old image and order one *now.*

Only £19.95

FREEZE MACHINE for speed, power and ease of use

- ☐ **Unstoppable Freeze**
- ☐ **Fast save routines**
- ☐ **Ultra-efficient file compactor**
- ☐ **Lazer and Turbo fastloads**
- ☐ **Integral reset button**
- ☐ **Tape turbo facilities**
- ☐ **12 second disk format**
- ☐ **Selective file copier**
- ☐ **Selectaload**
- ☐ **many more useful features!**

Only £28.95

For speed, power and ease of use it has to be Freeze Machine, probably the most effective backup cartridge on the market! Incorporating two types of fast load routines you can SAVE and reLOAD your favourite games in as little as 10 seconds and no more than 18. Numerous invaluable facilities available, including a built-in reset button. Utility Disc V3.0 also available to complement usage of the cartridge. It allows complete transfer to disk of many tape-based programs that load extra parts, eg. Gunship, Last Ninja, World Games, Supercycle. A very useful add-on.

Utility disc only £7.95

FREEZE
RESET
FREEZE MACHINE

Selected Products

DOUBLER '64 ...... Makes perfect tape backups every time. Consists of hardware and software. Requires access to two data recorders. Very easy to use, only **£12.95**

ICONTROLLER ...... Natty little keyboard mounted cursor controller, ideal for icon-driven applications like GEOS **£11.95**

DATA RECORDER ...... CBM compatible, same as C2N/1531 but cheaper and includes pause control button **£24.95**

DOLPHIN DOS ...... Parallel operating system for use with 64/128 and 1541 disk drive. Fantastic speed increase on LOAD and SAVE whilst maintaining CBM disk format. Many extra DOS & BASIC commands, includes built-in monitor and Centronics printer driver **£69.95**

RENEGADE DISK BACKUP ...... The most powerful on the market today **£19.95**

1541 PHYSICAL EXAM ...... Consists of digital alignment disk and drive fault diagnosis software to check and correct 1541 head alignment. Includes quiet drive stops **£39.95**

1541 QUIET DRIVE STOPS ...... Silences 'knocking' noise with 1541 drives **£4.95**

AZIMATE 3000 KIT ...... Kit to check and adjust data recorder head alignment **£6.95**

AMIGA 500

NEW SPECIAL OFFER AMIGA PACK

Contains Amiga 500, TV modulator, Mouse, Joystick, Mouse Mat, 'Zynaps', 'Return of the Jedi', 'Custodian', 'Powerplay', 'Mercenary', 'Eliminator', 'Hellbent', 'Bubble Ghost', and 1 extra free game (while stocks last) *plus* 5 disks of public domain software!

All this for only £399.00

Amiga 500 with TV modulator **£359.00**

Philips CM8833 (Colour monitor suitable for Amiga 500) **£229.00**

Philips CM8852 monitor as above, but higher resolution **£299.00**

Cumana external 5.25" floppy drive 40/80 track 'Transformer' compatible . **£159.95**

Disks & Boxes

25 bulk packed 5.25" DS/DD disks with sleeves, write protect tabs and labels. Good quality and fully guaranteed, only **£13.95**

25 disks + box. Disks as above plus 50 capacity lockable storage box, only **£22.95**

25 disks + 100 box. As previous offer but with 100 capacity locking box **£24.95**

50 capacity box. Lockable storage unit for 5.25" disks with smoked perspex top **£10.95**

100 capacity box. Larger version **£13.95**

How to order from Evesham Micros

VISA

Phone us with your ACCESS or VISA card details on :
☎ 0386-765500

All prices include VAT and delivery. Express Courier delivery £5.00 extra.

✉ *Send cheque, Postal Order or ACCESS/VISA card details*

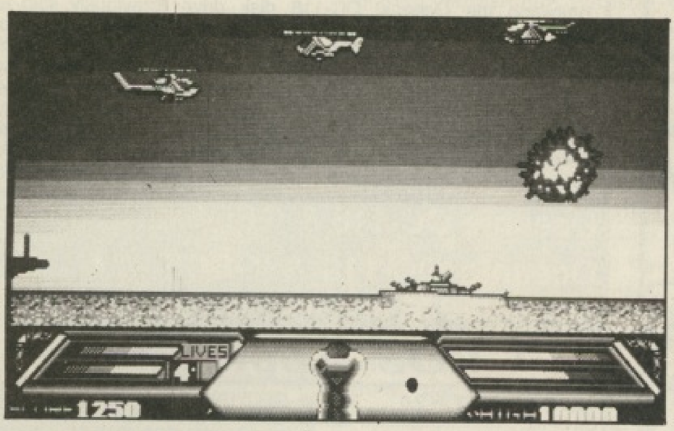
Govt., educ. & PLC orders welcome
Same day despatch whenever possible
All goods subject to availability, E.&O.E.
Open to callers 6 days, 9.30-5.30

Evesham Micros Ltd
63 BRIDGE STREET
EVESHAM
WORCS WR11 4SF
✆ 0386-765500
fax 0386-765354
telex 333294

Also at: 1762 Pershore Rd., Cotteridge, Birmingham B30 3BH Tel: 021 458 4564

Steigar

Marauder. Soldier of Fortune. Hit man. His business was death — other people's of course — and his currency was gold. (No, his name is not 'Computer Journalist'). If there is a problem — any problem — someone else's problem, Steigar will make it his problem — at a price.



No island fortress was secure. No Embassy was safe. If the gold was right — the job got done. Where he came from, no-one dared ask, but Steigar was bound for Hell. Then came capture. The interrogation.

"Too useful to erradicate" the CIA said.

Drafted into the US Navy, Steigar is trained to be a hit-and-run helicopter pilot. Only the Senior Command know that Steigar is no ordinary recruit. It may be a terrorist training camp that needs wiping out. It may be a military dictator de-stabilising the area who needs attention. It may be a disaster struck magazine company in Ludlow.

When the odds seem impossible, Steigar is let loose, dealing death and destruction to the chosen enemy. Steigar used to work for gold, now he works for orders — the job's the same.

Steigar, says Screen 7, is 'the kind of arcade, multi-level, multi-weapon death or glory blast 'em up that wrecks joysticks. Dangerous big screen action for the mercenary in you!' Everyone has his price and Steigar's is £19.95 Amiga, C64 (D) £14.99 and (C) £9.99. Does that seem enough for the mercenary in you?

M.A.S.T. comes to Europe

M.A.S.T (UK) Ltd., are launching in Europe their range of hardware peripherals for Amiga A500/1000/2000 computers.

The "Match Box Collection" features the "Micromeg" 512K expansion board for the A500. This comes fully populated with 1 met hi-tech zip dram's and a battery backed clock. Micromegs use a fraction of the power of boards populated with the old style 256 drams chips.

"Minimegs" is small enough to fit into a jacket pocket. The M.A.S.T upgrade policy means that users are able to increase the memory at any time by simply returning the unit to the U.K. address. There are no computer warranty problems with "Minimegs" — it just plugs into the A500 or A1000 expansion port.

The "Unidrive" and "Twindrive" floppy drives with many features unique to M.A.S.T products will be joined by the "Tiny Tiger" range of high performance SCSI hard disk drives. These small units have storage capacities of 30, 42 and 84 Meg. For the first time anywhere in the world M.A.S.T will have the new 50 meg "Tiny Tiger"..

"Jumpdisk" (George Thompson Services who represent M.A.S.T in Europe) are launching "Doslab" a new interactive method of learning about Amigados and the CLI. At £14.99 for the two disk set, this program takes into account the years of experience jumpdisk and G.T.S have had in helping customers with problems related to the Amiga operating system. And "Mypaint" a 'paint program just for kids'. It features sampled sounds for each picture, animated icon drawing tools, special effects and much more.

They are also doing a first for the launch of "AMI ... alignment system". This is a precision floppy drive head alignment and performance monitoring system for the Amiga range of computers. Easy to operate, it will give Amiga owners the opportunity of checking the performance of their disk drives.

Screen 7

A new force in entertainment

'A new force in computer software entertainment' has announced itself: SCREEN 7.

SCREEN 7 claims already to have lined up a 'superlative host of new products'.

SCREEN 7's first product will be a computer version of the blockbusing cinema hit of the 1970's — JAWS. JAWS will be released across all the major 8 and 16 bit computers, including PC.

"We have looked long and hard at the type of products on the market today" commented a company spokesman. "We believe we have the right ideas and the right products for today's computer game enthusiast — you can be sure that you'll see some great products from SCREEN 7."

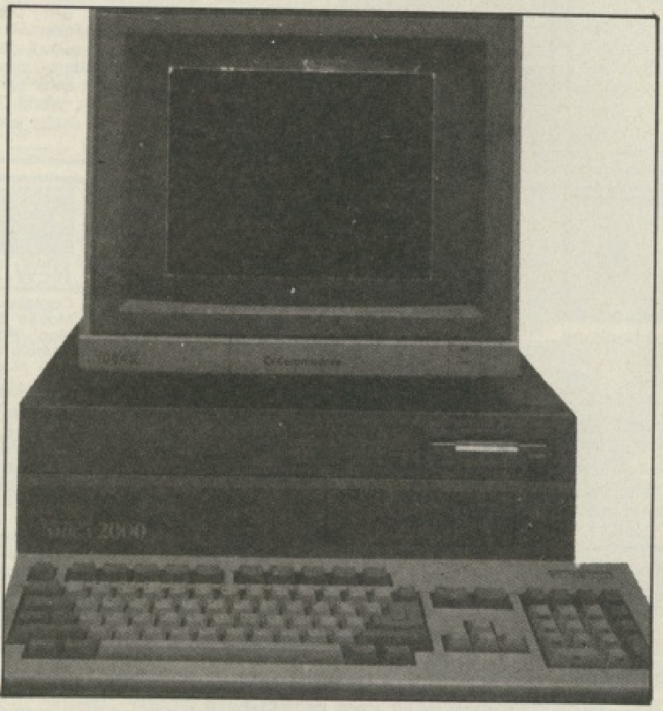
Other titles on the way in June are Steigar — an arcade blast, based on the exploits of a mercenary helicopter pilot, and High Steel — in which the player must overcome all obstacles and dangers to construct the steel framework of a huge sky-scraper.

Digipro

An upgrade path for Amiga 1000 owners is being offered by DIGIPRO Limited. In conjunction with Commodore UK, they are offering to all owners of the original Amiga 1000 the opportunity to part exchange the machine against the cost of a new Amiga 2000 (model B).

DIGIPRO will exchange for any working Amiga 1000 and £649.00 + VAT a new 1MB Amiga 2000. The only stipulation is that the 1000 must be at least a 512K model.

A DIGIPRO spokesman said "This is an ideal chance to show that the A1000 owners have not been forgotten and we can now offer them the chance to upgrade to the flagship of the Commodore range."



Get one in part exchange

Music while your PC works

Dutch-based Spase may not help office productivity with its new board that adds FM stereo radio to PCs. The PC Radio comes on a full-length card that plugs into an ordinary expansion slot.

A few keystrokes bring an on-screen radio window that allows the radio to be tuned-in and the volume settings adjusted. Stations can be selected automatically or manually by using the numeric keys to enter the frequency.

The radio offers a frequency range of 87.5 to 108MHz, 4 watt output on each speaker channel, a signal-to-noise ratio of 66dB, a stero/mono indicator and a mute key. PC Radio costs £90.

No more Bugs

The leisure market's longest surviving and most highly regarded fanzine The Bug is to cease publishing.

Its last issue will appear later this summer — commemorating five years in the market. It is expected to be the biggest ever.

The Bug has had a circulation of around 300. This did once get perilously near 1,500 after a deal with a distributor in 1987.

The decision to cease publication has come as a result of The Bug losing its driving force — co-editors Jaron Lewis and Jeffrey Davy — to Higher Education. One day perhaps, 'Son of Bug B.Sc.'!

Super Base 4

The latest release of the Superbase 4 database — Version 4.02 — includes LIM/EMS support, giving users maximum memory for their databases. It requires a Version 3 or greater expanded memory driver which conforms to the Lotus-Intel-Microsoft specification.

Other features in the new release include extra communications protocols; enhancements to the programming language; and five new keyboard shortcuts to toggle quickly between open files or indexes within a file.

Superbase 4 is bundled with Digital Research's Gem 3, which provides drivers for VGA displays and Postscript printers.

It costs £525. Users of Versions 4.0 and 4.01 can upgrade for £34.50. Contact Precision Software on (01) 330 7166.

Professor DOS

Individual Software's Professor DOS 4 has a computer-based package which simulates DOS and teaches the user features such as how to partition hard disks, use the graphic shell pull-down menus found in DOS 4 and run programs with a mouse.

Through the use of practical examples, graphic illustrations and a self-paced program, the Professor provides experience with DOS while allowing users to progress at their own speed. Pull-down menus enable the user to bypass or repeat any topic at any time during the program. Advanced DOS training includes redirecting input and output and creating batch files.

Smartguide for DOS, a terminate-stay-resident program providing on-line assistance, is bundled with the Professor.

Professor DOS costs £59.95.

Chinese W/P

Matsushita is to market a laptop personal word processor with an artificial intelligence dictionary able to convert roman characters into Chinese ideograms.

The new word processor, the Panaword U1, is priced at 165,000 yen. It has an AI dictionary of 34,000 words, and will contain specially designed large-scale integration chips for speedier conversion.

Value Added Resellers?

Recently police in the US have cracked several large prostitution rings, all heavily dependent on micro-computer systems.

These computers held large databases of names and addresses of clients, billing methods, sexual preferences, and the name of the prostitute servicing their needs.

A recently busted prostitution ring in San Jose, in the heart of California's Silicon Valley had over 50,000 customer names in its computers.

We're keeping a look out for applications software.

Atlantis

Mike Cole, Managing Director of budget pioneer Atlantis Software, today announced that they had signed an agreement with Novagen Software to re-release the Novagen 'clasic', "Encounter". Cole said "Whilst we are still committed to our policy of releasing mainly new and original games, the opportunity to re-issue a game of the quality of "Encounter" was just too good to turn down".

Originally released at a retail price of £9.95, "Encounter" is the game that launched Novagen to instant fame. Atlantis's price for C64 casette is £2.99

Anti-Radiation shields

Shields which protect against radioactive waves from VDUs have been introduced by BL Distribution.

The firm claims the Norad shields reduce radiation by 60 decibels over the entire frequency range of 20KHz to 200MHz.

Two types are available. The 19-inch Megashield is designed for high resolution colour, monochrome and grey-scale VDUs — the type normally used for desktop publishing.

The standard flexible shield for 12- 14-inch screens is designed to conform with the curvature of screens. Models are available for most monitors.

The Megashield costs £195 and the standard shield £95.

Contact BL Distribution:
Tel 0753 29961.

Award for Portable Computers

Protective Carrying Cases for portable computers, mobile telecommunications and other portable electronic office and test equipment manufactured by Targus Group are becoming so popular abroad that last year the company exported some 80% of its production. Export sales have been so successful that Targus has won the Queen's Award for export achievement 1989.

Targus produces a broad range of carrying cases to accommodate virtually every laptop computer, mobile phone and portable facsimile.

To handle the record volume of exports, Targus has office and warehouse facilities in London, New York, Los Angeles, Toronto and Sydney. Future expansion plans include offices in France, Germany, and Tokyo

Contact: Targus Tel 01 943 0794

01 for Amiga

There is now a bulletin board for London Amiga users.

It is called The Amiga Meditators. Membership of the group will cost £20 a year.

There will be free access to the bulletin board, with a special section for subscribers with a modem, in addition to selection of disk based PD software taken from the board will be available for a nominal fee to all users.

Contact: 01 for Amiga, 1 Maples Place, London E1 1BJ.
Tel: (01) 377 1358 (10am - 5pm weekdays)

WIN! WIN! WIN!

Win an OCEANIC DISK DRIVE — or even two!

In this issue of CCI. Peter McDonald is reviewing an oldie but goodie for the disk owners among you. But we thought that all those poor old cassette users should have a chance to get their sticky fingers onto a disk drive which, as any self respecting Commodore owner will tell you, is in a different class to stuffing cassettes into a data recorder which was really designed to be playing Michael Jackson or Madonna tapes. So this month we have competition which will give you the chance to win a great Oceanic OC-118 Disk Drive. In fact two of them because some kind company whose name we cannot reveal but you can find out from the Peter McDonald's review have given us two Oceanic OC-118s for the first two all correct entries pulled out of the Comp Bag by the delicate white fingers (she wears rubber gloves to handle the postcards) of Teresa the Comp princess. Oh, and both the winners will also get one copy each of the product that is being reviewed.

But first you have to find the review then answer three questions on it and then find out who supplies the product in question and look up their advertisement for the answer to the next three questions. Hands up who said this was too difficult for any cassette owner to follow!

1. Name two ways commercial software producers use to protect programs.

2. How many 'items' are there in the program to allow you to copy disks?

3. Does Disk Detector allow you to stop further data being written to a disk?

4. What was the previous name of the Oceanic OC-118 Disk Drive?

5. What is the Physical Exam?

6. With what would you silence the knocking noise in a 1541?

There really difficult isn't it? So okay, you cassette recorder owners, show you can be as bright as the disk drive crew, and get those replies flowing in.

**Answers on a postcard, please, by September 1st 1989 to:
CCI/Oceanic DD Comp, 40 Bowling Green Lane, London
EC1R ONE**

FOR THE FIRST TIME, THIS IS FOR REAL...

It is daybreak. You join the other pilots in the squadron crewroom to discuss objectives for the day ahead. Tactics, combat manoeuvres; all are captured completely by F-16 COMBAT PILOT. During your pre-flight briefing you instruct the ground crew on weapon loading and plan your attack…

The threat of imminent destruction and the stress of high-g combat you take in your stride. Your training perfected, you are now master in all five roles of the F-16, from air-to-air interception to interdictor strike.

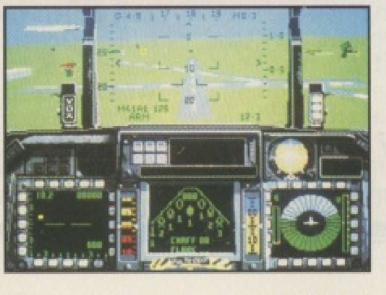
F-16
COMBAT PILOT

But now – Operation Conquest – the conflict you hoped would never happen. Aircraft, ground forces and the entire strategic infrastructure is under threat.

You haven't faced anything like this before…ever!

ORDER YOUR F-16 COMBAT PILOT NOW.
Simply phone (0276) 684959 quoting VISA or ACCESS credit card number, name and address.

BLACK BOX
SIMULATION



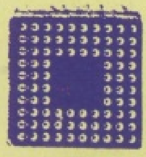
Atari ST screen.

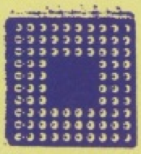
Digital Integration
The Real World of Simulation

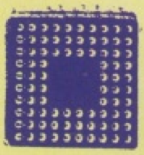
Digital Integration Limited,
Watchmoor Trade Centre,
Watchmoor Road, Camberley,
Surrey GU15 3AJ (0276) 684959.

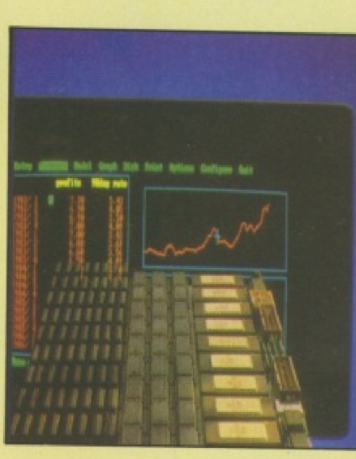
Amiga version – available end of June £24.95 inc p&p. Available now – IBM PC (CGA, Hercules or EGA, 5.25" or 3.5" discs). Atari ST.

One Day All Computers Will Be Like This









Looking out toward the horizon of electronics, a new form of processor is beginnning to exert an influence on the development of computing. The transputer is a remarkable and innovative design in processsing technology. Anthony Mael and John Tode investigate

TRANSPUTERISED ...

At the PC User Show, just ended in Londons Olympia, there was a lot to interest the serious business buyer of IBM compatible computers. If you wanted to run your Lotus or SuperCalc speeded up or examine the latest laser printer, it was the right place to be. For anyone else there was not a great deal to be thrilled by in cheaper and smaller MSDOS machines, bulky portables and rechargeable batteries.

But among the spreadsheets and the lookalike 386s, there was one area, tucked unspectacularly away at the side of the hall, that did contain something exciting - or at least potentially extremely exciting. It was called The Transputer Village. A paradoxical name - village, for it contained the most advanced, the most sophisticated, the outstandingly brilliant technical achievement present at the Show. Indeed, the transputer is probably the most notable development in computing in the last decade.

In The Transputer Village some ten organisations showed... well, very little. Partly because the transputer physically is very small and rather unimpressive, and partly because not too much has yet been done with the transputer that could been shown. But each of the organisations was professionally involved in a field that made the vaunted OS/2, the latest flavour of the month IBM PC, even the as yet unreleased 486-based machines look as slow and outdated as the early Sinclairs, the ZX80, would look to the 64 user.

Yet in the time since it was conceived in the seventies, the transputer has barely survived. For, like most innovative scientific developments, very few believed it would work or prove to be a commercial success and even fewer were willing to support the years of losing money its development was to take.

Picking Winners?

INMOS, the company that created the transputer, was set up under the scheme that the then Labour Government financed with the idea of encouraging the "white heat of technology" to thrust a lagging, scientific Britain into the forefront of the industrial world. Companies with with what seemed like good, commercially exploitable concepts were supported and given help to establish themselves especially in regions where there was a need for investment.

INMOS went to the west of the U. K. and started to develop the transputer - the complete computer on a single chip. As is usually the case, it took much lomger to create and develop the required product than had been anticipated. And the costs rose steeply. £50 million goes fast when you are in the electronics business...

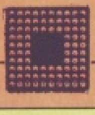
The Government changed. The Conservatives pointed out that in their opinion the function of the Government was not to try to "pick winners" but to let the private sector take its own risks and make its own gains and losses. The trouble with that is that in developments of the complexity and cost of high tech electronics, few companies have the combination of ideas, creativity and finance to be able or willing to take on projects like the Transputer. So when the Thatcher Government decided to sell off INMOS, it did not find it easy to get a buyer. It helped out by writing off the INMOS debt of many millions of pounds and eventually got Thorne-EMI to take it over for what was really a nominal amount of cash.

Soon, however, Thorne-EMI had its own troubles and found the loss-making INMOS a burden, So it, in its turn tried to sell off this troublesome set of people who just couldn't seem to get their wild idea into any commercial shape.

The problem mainly came from the dificulty in manufacturing the wondrous chip and not getting too many defective chips in each batch to make the whole operation unprofitable. Thorne hawked INMOS around without finding any serious takers.

The Transputer

The transputer, in one chip, contains a very fast 32 Bit processor, a quantity of fast memory to keep a record of results as it goes along, a double precision arithmetic unit, a scheduler to allow it to chop and change between jobs without delay and communication links that let it talk to four neighbouring transputers. All on one chip, one chip. . .



Parallel Processing

Parallel processing is one of the major advantages offered by the transputer. Parallel processsing is the technique of using many processors together, arranging for each to perform a separate portion of the task. In this way tasks can be completed very quickly through being simplified by being broken up into separate modules for each of the processors to manage. By dividing up data or programs with a transputer even a conventional PC can be speeded up by as much as 100 times.

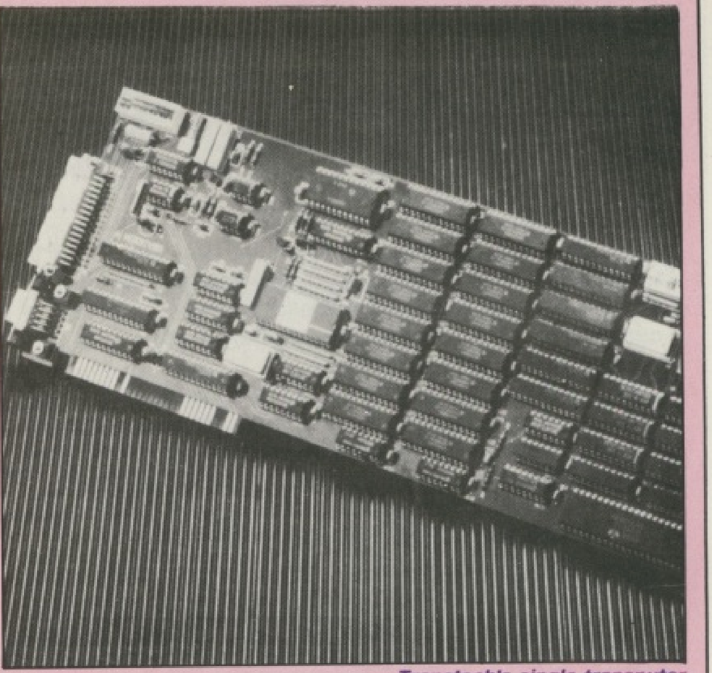
Gradually INMOS was getting it right. The magic chips began to appear, were tested and started to work with pleasing regularity. Other companies took them seriously and initiated projects that allowed them to write to transputers. Perihelion, a company led by Dr Tim King, who had been closely involved with the development of Intuition for the Amiga, created the basis for an operating system. Both the Amiga and the Atari ST were announced as being given a transputer version. Multinational organisations, like Commodore, in need of a glamourous technological initiative picked on the transputer.

Bigger Things

That little village at the PC User Show is the herald of much bigger things to come. In spite of the lack of governmental support, as such a project would have received in Japan or the U. S., the transputer has survived. Its uses will multiply and it will, with the enormous power it offers in an economic and easily usable form, have a profound effect on the whole development of the computer - and the computer, apart from the automobile and the TV, has already has the most profound effect on today's lifestyle.

INMOS has already become one of the most important chip makers in the world. But had you heard of INMOS? Have you heard of the British Government taking note of it and supporting other scientific projects that might turn out to be the winners that we as a nation and the world needs? From a little company ekeing out and existence on begrudged taxpayers money to becoming an influence on our lives. Probably in any other country in the world that would be regarded as a success story to boast about. — there must be a lesson in there somewhere. Let's hope the powers-that-be and who have *our* our money to spend will learn it.

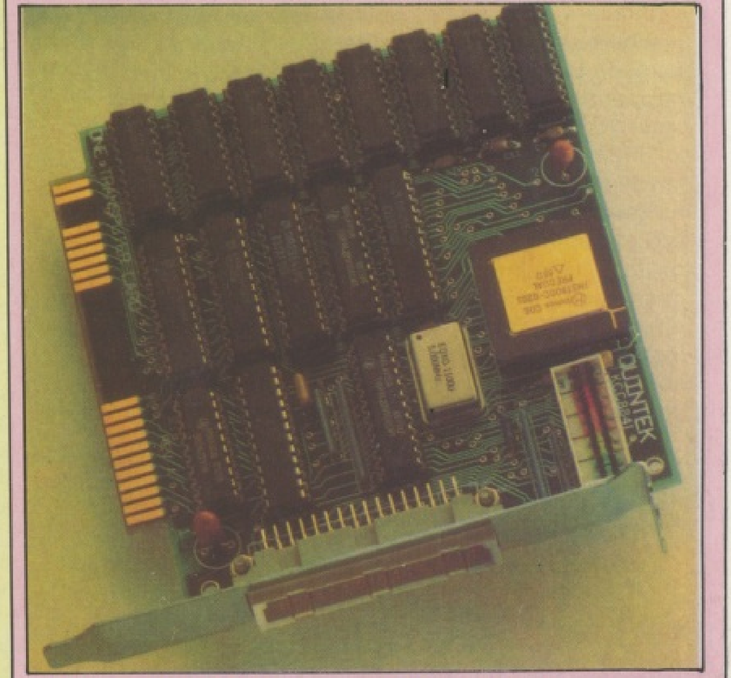
A. M.



Transtech's single transputer board for PCs

What has gone before.

The traditional approach to programming since the invention of the computer by Babbage has been to follow a series of sequential instructions; better known as the program. As we all know, technologial advances have enabled information processing to reach a stage that the inventor could never have envisaged. However this age-old technique has encountered limitations. The most fundamental of these is speed and so what was needed was a fresh approach.

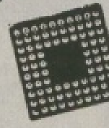


The problem is that in conventional computers a single processor executes a list of instructions upon a set of data. In computing terms this follows the SISD model (Single Instruction stream, Single Data stream).

cont. on next page

continued from page 19

TRANSPUTERISED



because there is no communication between the processors, and consequently all the programs have to be self-contained. Therefore experience has shown that these programs tend to be large and cumbersome, again restricting the speed of processing.

The next step on from this was to allow the processors to run different programs. The large programs encountered in SIMD computing would be split into smaller parts. These would be run on individual processors and would receive their own sets of data. This is the MIMD model (Multiple Instruction stream, Multiple Data stream) and has become the most effective form of parallel processing. Unfortunately this has introduced problems of its own.

Since the programsm size is much smaller, the level of variable dependancies to be satisfied. A hardware inter-communication network would allow this, but there still would need to be some control placed on the sharing of the value of the variables between the programs. The network itself actually places restrictions on the communications speed between the processors, another potential bottleneck.

The need for this control is primarily due to the programs running at different speeds. A value of a variable may well be required from another program while it is still being processed. This leads to the wrong value being used. To solve this, many different approaches have been tried and tested. The most significant of these has been message passing. This is where the program wanting the value of the variable is made to wait until that variable is ready. When this happens, the programs are synchronised and the value (or message) is passed between them.

This has been the basis of a new integrated hardware and software approach. Instead of using hardware and software used originally for SISD programming, as are most of today's processing devices, new integrated circuits and languages were designed specifically for MIMD programming. The opportunity existed for a totally new start. This time, instead of looking first at the hardware and letting software catch up, again as in the case of SISD computing, both were considered together.

> *"The language has keywords which are similar to those found in other languages, but it has four others which are crucial to its successful operation."*

What was wanted was a computing system which supported both the MIMD model and message passing, without the potential bottleneck that the intercommunication network could introduce, and enabled programs to be written without consideration of the hardware that the software would be run upon.

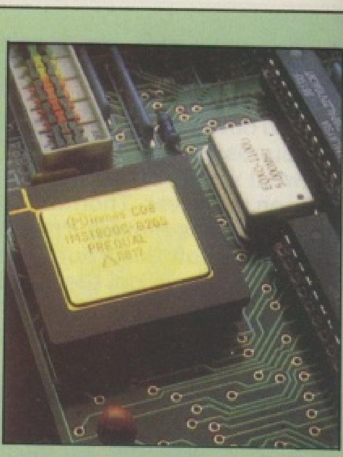
Power Never Comes Cheap

Prices of transputers - on circuit boards - for you need some way of plugging them into a computer - range from about £500 to around £5000. Commodore has not yet announced any prices for its transputer-based Amiga but it is thought that it will aim at around the £4000 mark.

U.K.-based Cesius have created a real-time frame grabbing board which can handle 16 million colours and is broadcast standard for use in TV. Cesius also have a transputer card that can be inserted into a PC which will give 1200 by 1024 pixel resolution.

Sension have fibre-optic boards that link transputers in PCs with those in larger networks.

The transputer's communications links are independent of processing. Conventional microprocessors do not do this for they use their normal memory interface to handle communications as well. That is why unlike normal microprocessors, two transputers can work at double the speed of one, or five at five times the speed and, we are told, 100 at 100 times the speed. .



The transputer uses very little space so companies like Bristol-based Quintek can fit nine processors on one circuit board where manufacturers employing other chips can fit two at best. When combined, as on Quintek's Fast9 circuit board, processing power of 10 Vax mainframe computers can be achieved.

No Problem?

How can the tremendous power of the transputer be used when most software has been designed to run on just one microprocessor? A technique called flood-fillinmg has been developed. This is where software automatically routes tasks generated by a master program to the worker processors — 'farming it out'. Hence some transputer boards are called 'farm cards'.

This occurs at a rate determined by the speed of the processor and the swiftness at which the memory can be accessed. Eventually, one of two situations will arise. These occur when either the memory cannot supply the processor with the data it needs fast enough, or the processor cannot handle the data load. This is known as the Von Neumann Bottleneck.

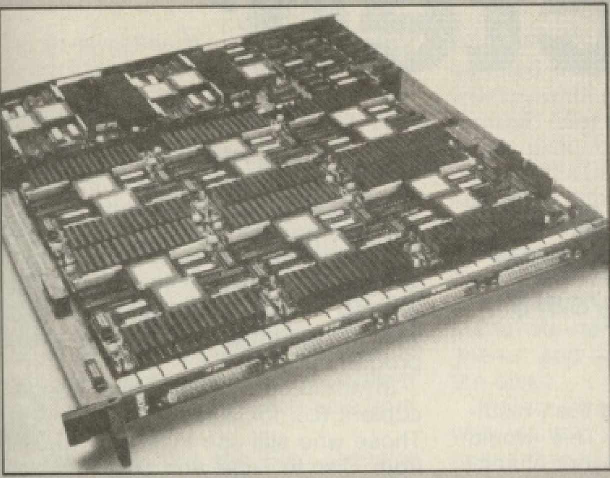
To increase the potential speed of any given computer faced with this bottleneck, the obvious solution is to spread the data load between a number of processors. When this was done, the programs would be downloaded to all the processors in the computer. These would then receive and process seperate streams of data, corresponding to the SIMD model (Single Instruction stream, Multiple Data stream); the beginning of parallel processing. Thus the processing power of the computer was greatly increased. Even so, this method is confined in its use

With this in mind the software language Occam, a name devised from the term "Occams Razor", and its hardware component the Transputer, were designed.

What is happening now.

Essentially, all programs can be thought of as a number of small sequentially executing programs or processes operating in parallel. All of these processes would communicate via message passing along software channels. This process model forms

the basis of the Occam language. The language has keywords which are similar to those found in other languages, but it has four others which are crucial to its successful operation. These are:
SEQ — from this point in the process all the instructions execute in sequence;
PAR — from this point in the process all the instructions execute in parallel;



Transtech's 17 transputer board offers immense power for complex tasks

S.channel name! variable — when the process on the other end of the channel arrives at the corresponding ? sent the value of the variable to that process otherwise wait until this can happen.
D.channel name?variable — when the process on the other end of the channel arrives at the corresponding ! send receive the value of the variable from that process otherwise wait unitl this can happen.

This introduces a clear language which can be used to successfully implement the MIMD model. The programs written can be written without consideration ofthe underlying hardware since this is design specifically for the language. The program with all of its processes and channels can be mapped onto the hardware by the use of a configuration file.

The hardware is the Inmos Transputer. The transputer was created by some scientists of vision in the late seventies and early eighties in the U.K. with money from the then Labour government. It was a major achievement but nearly failed with the present conservative administration withdrew its support.

The transputer is a device that fully supports everything which is needed by the Occam language. The Transupter is a complete computer on a single integrated circuit. It is a high performance 32-bit processor which takes much from the work done on the new RISC (Reduced Instruction Set Chip) architectures. In addition to this processor there is some internal high speed static RAM, a configurable external memory interface, and four high speed communication links and link controller for communication with other Transputers. The internal RAM stores the variables which the processes interact with. The channels are also contained in this memory. In message passing the value of a variable of one process is placed in a memory location until it is picked up by another process. This is important since the way channels are handled virtually the same four processes communicating with one another on-chip and off-chip. The difference is that when processes communicate off-chip the link controller takes over so that the processor can carry on with other work. Consequently, the software can be designed without consideration for the way the hardward is interconnected.

The interconncetion network of the Transputers does not suffer from the problems of conventional networks as the links can handle communication at a rate of 20 million bits per second.

Due to the design of the Transputer, many of these processors can be linked together to give a potentially huge processing power. 10 to 20 of these running a suitably structured program can get into the computational range of a Cray at a fraction of the cost.

So it is no surprise that Commadore, among many other computer companies, are now incorporating transputers into their hardware. For what the transputer offers is a super computer in a desktop form at prices that mean we are not far from those SF dreams of everyone being able able to tap in to amazing power and speed in ways and for purposes that are no longer limited except by our imagination.

J.T.

A Few Simple - sorry - Sample Tasks

In financial modelling - testing out possibilities for changes in taxation, for example, the Second Sight spreadsheet, using transputer power calculates relationships between different sets of financial data to make a targettted forecast, in other words what you have to do to reach your desired goal, like making a million pounds in very changeable financial climates.

Perihelion have just released their operating system Helios version 1.1. This supports networking between transputer boards in interconnected PCs.

Speaking the Language

While the transputer was developed originally only with Occam (created by Intel) in mind, Pascal, Fortran and Parallel C compilers are now available with Modula-2, Basic and Ada due to be released shortly. A debugger is also available in Parallel Pascal.

Late News

Plessey, the U. K. s largest chip manufacturer has closed its Gallium arsenide chip factory. Gallium arsenide, as CCI has reported before, is the material forecast to replace silicon as the basis for future computer chips. Plessey is afraid of being taken over and is trying to save money. Closing the factory chops 375 jobs but, of course, puts Plessey and maybe Britain too out of the gallium arsenide business. INMOS' survival to produce the transputer in a country like the U. K. , is, some would say, as great a miracle as the development of the transputer itself.

FINAL NOTE

INMOS, the company that invented the transputer is up from 32 Bit to 64 Bit architecture.

The U.K. Government has at last woken up to the immense potential of the transputer and has begun providing money for The Transputer Initiative which among other things is intended to foster the growth of the U.K. as a centre of expertise in transputer technology. Included in its activities is the establishment of a pool of transputer hardware and software for use in academic institutions. They have also set up a National Transputer Software Library. So if you want to borrow the equivalent of a super computer. . .

'Disector Dissected'

Peter McDonald

The 'Golden Oldie' is Evesham Micro's 'Disc-Disector' version V5.0, written by Angus Ager and Les Allan. Though launched some years ago it is still available.

Disc Disector is a very useful collection of utilities for the C64. The items which appear in the MENU when you type LOAD"D",8,1 are:

1 *Nibbler Menu*
2 *Fast File*
3 *Fast Copy*
4 *Fast Format*
5 *Select Menu*
6 *Scratch*
7 *Rename*
8 *File Copy*
9 *Disc to Tape*
10 *Discmon+*
11 *Disc Orderly*
12 *Index*
13 *Directory Change*
14 *BAM Allocation*
15 *Unscratch*
16 *View BAM*
17 *Track Reader*
18 *Disc Rescue*
19 *Disc Protect*
20 *Novatrans*
21 *Double Back-up*
22 *Disco* and
23 *Trans QD*.

In fact the numbers 10 to 23 inclusive are not used in the Menu; letters are used instead. But I have numbered them so that you can check that there are 23 items on this disk. (Actually, there are more than two dozen altogether because a selection of copying programs, not listed above is obtainable via the Nibbler Menu.)

My bet is that most people who buy this program do so because they want to be able to copy commercial software which has a greater or lesser degree of protection installed. As long as it is legitimate to make back-ups of commercial programs for the purchaser's own use, it must be moral to sell copying-programs like this. Personally, I can see that it would be wrong if I used *Disc Disector* to take copies of commercial software and then distributed them to friends. This would deprive writers and purveyors of software of their rightful reward. But I have never felt the least guilt when taking a back-up copy for actual use, so that I can keep the original in perfect condition. Some software producers leave their disks free from protection but require you to use a dongle, or other device. Amongst these one could mention Hack-Pack (reviewed in ***CCI*** recently) and *VizaWrite Classic*. One might almost say that the producers of these programs *intend* you to take back-ups.

> **" Altogether there are five ordinary items ('nibblers' and copiers) which are capable of copying a whole disk of protected software."**

So what about *Disc Disector*? Does it successfully copy *all* commercial disks? Well, that would be a bold, not to say impossible, claim to make. Suffice to say that I cannot recall it ever having failed me completely, though one has to try various items, sometimes, before finding the correct one. And *Disc Disector* is more temperamental on some drives than others. (A commercial disk directory program, which threatened to write a self-destruct instruction into any back-ups, was true to its word, but one can hardly blame *Disc Disector* for that.) Altogether there are five ordinary items ('nibblers' and copiers) which are capable of copying a whole disk of protected software. Some are more powerful than others, but sometimes the powerful ones fail and the less-powerful ones succeed. There is also a collection of parameters, and a method of adding one from the disk you are copying, if the 3 min Nibbler is followed by a prompt 'parameter copy required'. You will be unlucky if you cannot copy most of your disks with one or other of these programs.

In addition there are two 'double' copiers (i.e. for use with two drives). Those who still use tapes will benefit from 'Disc to Tape' and 'Disco' (which works the other way round, with normal speed load software) and 'Novatrans' (tape to disk).

Before we leave copying, there are two programs which list files on a disk and allow you to choose which ones you want to copy to another disk. 'File Copy' does this perfectly well; 'Fast Copy', as the name implies, covers the same ground but at top speed. Although these worked O.K. for me with a C64 and a 1541 drive, this was not so with a C128 in 64 mode, using a 1571 drive.

There is a clutch of items for the clinically-minded who love to delve into tracks and sectors, to view and allocate BAM, and so on. 'Discmon+' is a monitor/editor program which could be useful to the type of enthusiast who understands these things and wants to change or repair a disk.

For the less expert, there are some useful items like 'Unscratch' (which enables you to restore a scratched file); 'Disc Rescue' (it comes to your aid when the disk's directory has been 'newed') and (since prevention is better than cure) 'Disc Protect' which stops further data being written to a disk, even though the write-protect tab is off.

More run of the mill, but useful, are items enabling you to fast format a new disk; to scratch files selected from the disk's directory (and to validate the disk afterwards); to rename individual files; to make changes to the directory.

I have left to the last a set of items which I use often, usually in conjunction with each other. First there is 'Index' which enables you to get a print-out of the directory on a disk. This works with the STAR LC-10C, if all

'Disector Dissected'

the dip-switches are up. It has a facility for adding the date and it prints out the disk name and the files on it. It seems to me to print very slowly: perhaps I have missed something. However, it is useful if there are so many files that you cannot get them all listed on the screen at the same time.

Either using 'Index' or otherwise, study the items on a disk. Scratch any you do not need. Note ones which are not themselves programs but are sub-programs of another. The idea is to make a fast-booting menu system so that you can run the programs from the menu.

First of all, use the *Disc Disector* program 'Disc Orderly' to re-arrange your files into some logical order ... e.g. alphabetical (which you can do more or less automatically) or another which suits your particular purposes better.

Next use 'Select Menu' to prepare a menu of the items on your disk. The program asks you in respect of each item to say whether or not you want it to be included in the menu. This is where it is useful to know which are the main programs and which are merely sub-programs, and are loaded from inside a main program. Obviously you would only include the main programs on the menu.

Once you have made your choice, the program gets to work, eventually putting the menu on screen so that you can test it. Like *Disc Disector's* own menu, it lists the items with the numbers 1 to 9, and then letters, against each one. You simply type the corresponding figure or letter and the chosen program loads and runs.

O.K. Now for a wrinkle. After terminating a program with RUN STOP-RESTORE, you can get back to the menu, either on *Disc Disector* itself, or on any disk which has a menu created by *Disc Disector*, by the simple action of typing SHIFT/RUN STOP. I did not realise this when I first bought the program, and I wasted a lot of time adding 'RETURN TO MENU (Y/N)?' routines at the end of my programs. It isn't worth it!

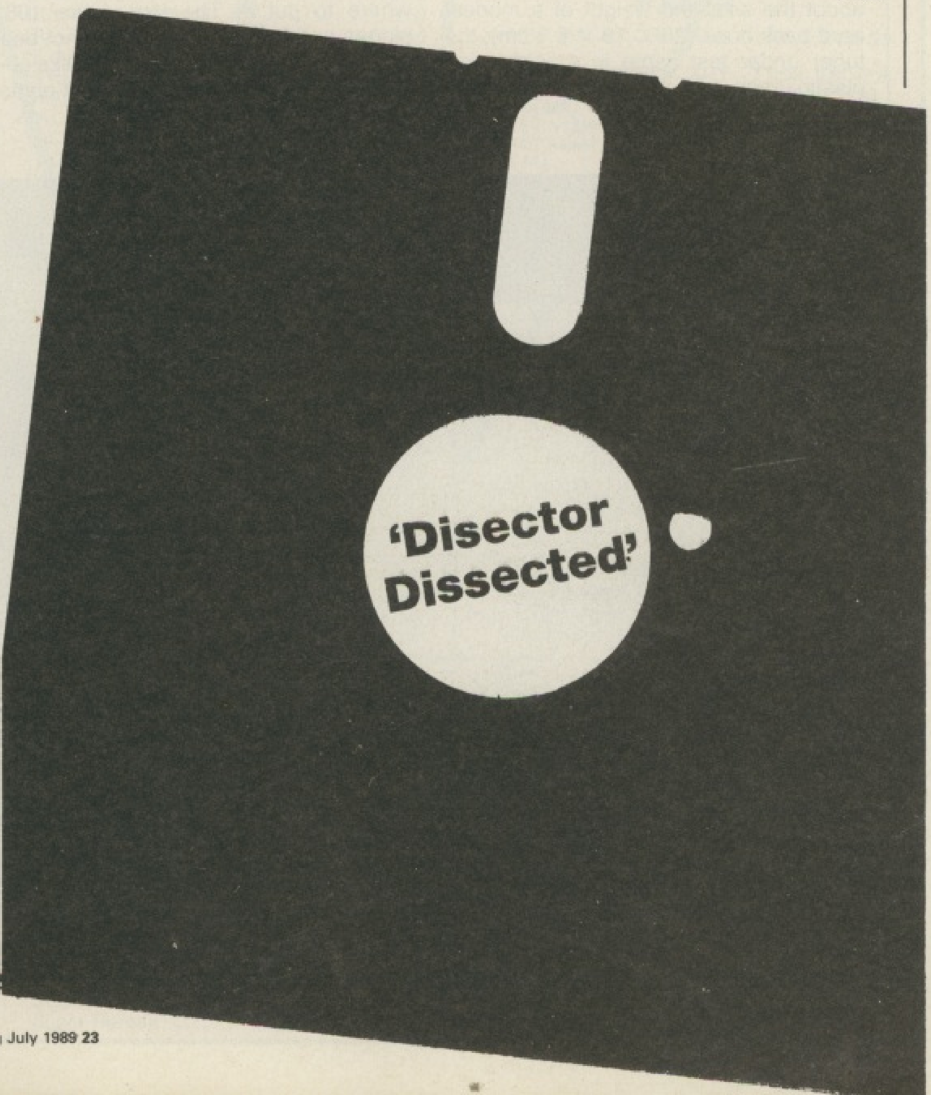
If you have followed the procedure so far, you have a disk where you can obtain the menu by typing LOAD-"MENU",8 and RETURN. If you want to go a little further, you can use the program 'Trans QD' which enables you to create a fast boot menu system as used on *Disc Disector* itself. This will only work when there is a menu on the disk. After applying the QD system to the disk you type LOAD "QD",8,1, press RETURN, and after a few seconds of the familiar flashing lines pattern on the screen, the menu loads and runs. (What if you want to use it to create a fast boot system to another program, on a disk which carries no menu? Re-name the chosen program: 'menu'; and then apply 'Trans QD' to the disk.)

If *Disc Disector* is mainly for those who want to copy disks, why have I concentrated on the other aspects? For two reasons. First, there is nothing much one can say about copying programs, save that they work. Second, I believe that the other utilities in themselves make *Disc Disector* worth buying, and I have had a lot of use out of the 'Disc Orderly' and 'Select Menu' items. Again (though the facility is available elsewhere) I like the 'Scratch' program on *Disc Disector*. It is much easier, for instance, to decide which items to scratch, and then scratch them all at once, instead of having to scratch each one individually as on (say) *VizaWrite Classic*.

It might be retorted, truthfully, that some of the facilities on *Disc Disector* are already available, in a different form, on the Commondore Test/Demo diskette. But there is much more here, and it is convenient to have it all together on one disk.

That leads me to the final point: yes, you can use *Disc Disector* to copy many 128 programs, though not to copy a two-sided disk. Price? £19.95 from Evesham Micros, 63, Bridge Street, Evesham, Worcs. WR11 4SF. I've certainly had *my* money's worth from it.

P.M.



PHILIPS MONITOR TUNER

Does your computer monitor have a dual identity? Peter Lee's does – he Explains . . .

A home computer monitor's average use is likely to be around a couple of hours a day. Considering how much they cost, they must be one of the most under-used resources around.

Being the dedicated beast it is, there is little you can do with one when the computer is switched off. Maybe stick a clock or a photograph on top? Apart from that they just sit there gathering dust and depreciating . . . Luckily there is no need to worry about the cost-efficiency of your investment any longer thanks to the introduction of a hi-tech add-on which will convert the monitor into a television set – at the flick of a switch.

The Philips AV7300 is a small TV tuner about the size and weight of a modest hard-back book (25 × 19 × 5.5 cm); the tuner under test came in a light beige plastic case and was put through its paces using an Amiga 1000 and Commodore 1081 monitor. The mains-powered tuner will work with any monitor which has CVBS and audio IN connections and has a pass-through to enable the computer's signal to enter. A sliding switch on the front panel selects either computer or tuner mode.

The unit is supplied with the appropriate leads for connecting to the monitor and comes with twin telescopic aerials which provided excellent quality pictures in my part of the country but which can be replaced by your own antennae if you live in a poor reception area.

The tuner took literally five minutes to set up, with the biggest headache being where to put it! The top of the 1081 slopes and in any event I could not bear to stare at a screen which looked like one of those quaint TVs from US TV sit-coms.

If you have an outdoor aerial, you can just as easily put a splitter on the cable and run an extension to your computer haunt, giving possibly a crisper picture and also allowing a more discreet positioning of the tuner.

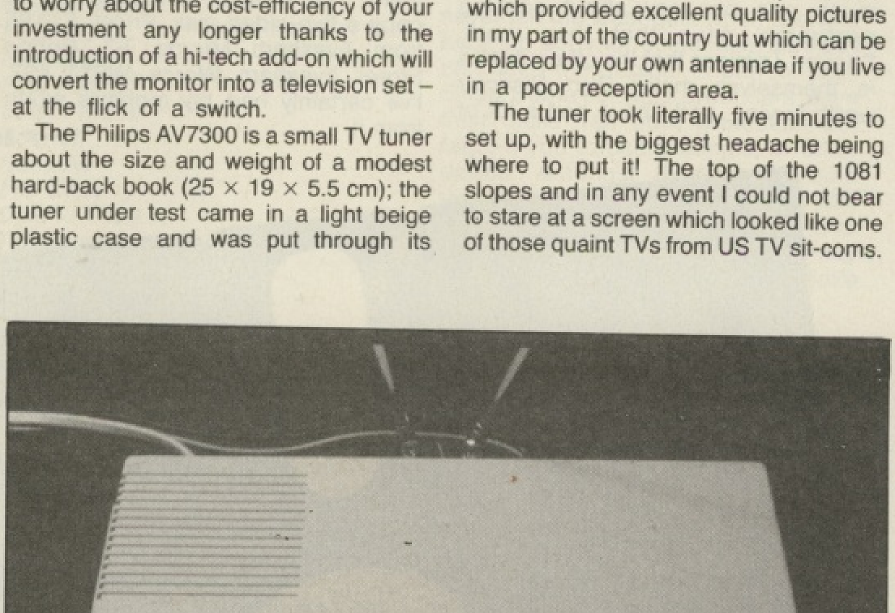
> ***"The tuner took literally five minutes to set up, with the biggest headache being where to put it!"***

The power cable is a generous length – but unfortunately the leads which connect to the monitor are around a metre long, which restricts the siting unless you buy a couple of extension leads. As channel selection is by means of a push-button front panel, you cannot put the tuner too far away. In fact it is something of a logistical nightmare trying to cram a tuner on a desk already cluttered with drives, modems and printers – take my wife's word for it!

Up to 12 chanells can be set by tuning the control dials hidden under a flap, which also activates the automatic frequency control when it is closed.

The quality was all you could expect and was even an improvement on some TV sets I have seen thanks to the 1081 monitor's excellent display qualities. It goes without saying that you do not need your computer switched on while using the monitor (which has to be on) as a TV and in fact problems of interference do arise if you have the Amiga running simultaneously. The monitor's brightness, colour, contrast and volume controls are all active on the TV picture, so in effect for £69.95 you have got a first rate TV receiver.

My only problem is – where on earth is the tuner going to sit. **P.L.**



Price: £69.95
Contact: Digipro Ltd., Enterprise House, Howards Grove, Shirley, Southampton, Hampshire SO1 5PR (0703) 703030.

, you can
the cable
computer
er picture
reet posi-

erally
up,

nere

us length
nich con-
a metre
nless you
eads. As
ns of a
nnot put
act it is
re trying
already
nd prin-
it!
y tuning
a flap,
atic fre-
ed.
l expect
n some
he 1081
lities. It
ot need
e using
as a TV
ence do
running
bright-
he con-
e, so in
rst rate

earth is
P.L.

erprise
hirley,
5PR

DIAMOND COMPUTER SYSTEMS LTD
0703-338933

Authorised Amiga 2000 Centre
Authorised Amiga 2000 Desk Top Publishing Centre
Authorised Amiga 2000 CAD/CAM Centre
Authorised Amiga 2000 Audio Visual Centre
All 2000'S 1.3 Kickstart ROM Latest revision motherboard 4.5

B2000 PACK. B2000 P/EX. AMIGA 2000 PRODUCTS

B2000
Philips 8833 monitor
XT Bridgeboard
32MB PC/Amiga Hard Disk
.... £1369

B2000	Phone
8MB RAM Board	£399
AT Bridgeboard	Phone
XT Bridgeboard	Phone
Genlock	Phone
Flicker Fixer	£259
2nd 3½ int drive	£59
Midi Interface	£29
Superpic	£479
Unixcard	Phone
68020 Co Pro	£259
B2000 DTP Packages	P.O.A.

DIAMOND A500 PACK

ROLLING THUNDER, BIONIC COMMANDO, JINKS, LEADERBOARD, WINTER OLYMPIAD 88, PLUTOS, SECONDS OUT, MOUSETRAP, SUICIDE MISSION, FROSTBYTE, GRID START, KARTING GRAND PRIX, LAS VEGAS, THAI BOXING, XR35, FLIGHT PATH 737.

£399. INC VAT

A500 £299. + VAT

PRINTERS

LC10 COLOUR	**£189**
LC10	**£149**
PANASONIC KXP1081	£119
NEW PANASONIC 1180	£159
NEW PANASONIC KXP1124	£259
EPSON LX800	£149
CITIZEN 120D PARALLEL Please specify	£119
CITIZEN 120D C64/128 VCR Please specify	£119
NECP6+	£429
XEROX 4020	£949
INTERGREX	£2999
STAR LASER	£1249
STARLC24/10	£259
1.8M CABLE	£5
EPSONLQ500	£259
OKIMATE 20 24 PIN COL. PRINTER	£99.95 inc VAT

GENLOCKS

G2 GENLOCK	PHONE
MINIGEN	£99.00
AMINET NETWORK	£43 per node
MAC EMULATOR	£139.95 inc
BBC EMULATOR	£47.95 inc

COMMUNICATIONS

AEGIS DIGA	£39.95
BBS-PC	£83.95
RUBYVIEW/TERM	£69.30

VIDEO DIGITISERS

COPY STAND FOR DIGIVIEW	£53.95
DIGIDROID	£53.95
DIGIVIEW ADAPTOR	£19.95
DIGIVIEW FILTER WHEEL	£10.49
DIGIVIEW GOLD	£99.95
DIGIVIEW UPGRADE 2 TO 3	£13.95

DISK DRIVES

CUMANA CAX 354	£79
CUMANA CAS 1000	£105
DIAMOND DRIVE THRU PORT ON/OFF SWITCH NEC MECHANISM	£59
COMMODORE A590 20MB HARD DISK 2MB RAM	£499
A500 40MB HARD DISK	£339
A500 40MB HARD DISK FAST FILE AUTOBOOT	£489
A2000 40MB HARD DISK FAST FILE AUTOBOOT	£495

JOYSTICKS

COMPETITION PRO JOYSTICK BLACK £14.95 COMPETITION PRO JOYSTICK CLEAR	£14.95
COMPETITION PRO EXTRA JOYSTICK	£15.95
PROFESSIONAL AUTO FIRE	£16.95
QUICKSHOT II	£6.95
QUICKSHOT II PLUS	£8.50
QUICKSHOT II TURBO	£10.95
SLIK STICK	£6.95
SPEEKING	£12.95
STARFIGHTER	£8.95
TAC 2	£10.95
TAC 3	£11.95
TAC 5	£12.95
TAC 30	£13.95
TAC 50	£14.95
TRACKBALL	£7.99
CRUISER JOYSTICK	£9.95
CRUISER JOYSTICK CLEAR	£12.95
CRYSTAL JOYSTICK	£14.95
CRYSTAL TURBO JOYSTICK	£18.95
NAVIGATOR	£14.95

MONITORS

PHILIPS 8833 SPECIAL	**£179**
PHILIPS 8852	**£209**
PHILIPS 9073	£359
NEC MULTISYNC II	£399
COMMODORE 1084/S (Lower resolution than Philips 8852)	£189
SCART CABLE	£5

TV MONITORS

ITT 14-INCH REMOTE CONTROL	£179
FERGUSON TV MONITOR 14-INCH	£189
PHILIPS 14-INCH R/L TELETEXT	£217
PHILIPS 15-INCH FST	£189

ACCESSORIES

MOUSE MAT	£4.95 inc VAT
COMPUTER DUST COVER	£7.95 inc VAT
MONITOR DUST COVER	£9.95 inc VAT
DISK DRIVE DUST COVER	£5.95 inc VAT
CBM 3.5 DISK (BOX TEN)	£14.95 inc VAT
CBM 5¼ DISK (BOX TEN)	£9.95 inc VAT
2 WAY SWITCH BOX	£14.95 inc VAT
JOYSTICKS	From £5.00 inc VAT
A500 MOUSE	£24.95 inc VAT
A500 PSU	£29.95 inc VAT
DISK BOX (100 CAPACITY) (3½ or 5¼ Please specify)	£9.95 inc VAT
3½ CLEANING KIT	£7.95
4 WAY DATA SWITCH BOX	£19.95 inc VAT
DIAMOND DS/DD DISCS	£9.95 inc VAT

RIBBONS

RIBBONS	2+	6+	12+
LC10 BLACK	£3.90	£3.70	£3.50
LC10 COLOUR	£6.50	£6.00	£5.50
LC24/10	£6.50	£6.00	£5.50
OKIMATE 20 BLACK	£6.60	£6.20	£6.00
OKIMATE 20 COLOUR	£7.00	£6.50	£6.20
CITIZEN 120D	£3.25	£3.10	£2.90
EXPSON LX800	£2.50	£2.10	£1.90
PANASONIC KXP1081	£3.95	£3.80	£3.60

PAPER

A-MAX MACINTOSH EMULATOR..... £139.95

Printer Stationery	GSM	QTY	1 BOX	2 BOXES
11 x 9½ MP	60	2000	£14.50	£14.00
11 x 9½ MP	70	2000	£17.50	£16.50
EXACT A4 MP	70	2000	£22.90	£20.75
EXACT A4 MP	90	1000	£15.20	£13.25
11 x 14½	60	2000	£20.00	£18.00
11 x 14½	70	2000	£22.00	£20.00

HOW TO ORDER FROM

DIAMOND COMPUTER SYSTEMS LTD

ALL PRICES EXCLUSIVE VAT AND DELIVERY UNLESS OTHERWISE STATED
COURIER £5.00 INC VAT

PHONE US WITH YOUR ACCESS OR VISA CARD DETAILS ON
☎ 0703 338933

GOVT. EDUC + PLC orders welcome
Same day despatch whenever possible
All goods subject to availability. E + O.E.
Callers please phone for new showroom details.
SHOWROOM 11.00 AM - 7.00 PM MON-SAT
THURSDAY LATE NIGHT 8.00 PM.
SATURDAY 10.00 AM - 5.30 PM

DIAMOND COMPUTER SYSTEMS LTD.
6 Gwen Rhian Ct,
Court Road, Southampton

MUSIC

Music Audiomaster 2	£48.95
DT T's System Controller	£139.95
Dynamic Drums	£38.45
Pro Midi Studio (Mimetics)	£97.95
Sound Oasis	£97.95

SOUND DIGITIZER

Futuresound	£69.95
Perfect Sound	£67.95
Text Pro	£39.95
3D Graphics	£27.95
Critics Choice	£99.95

DESKTOP VIDEO AND GRAPHICS

Aegis Animator/Images	£72.49
Aegis Impact	£44.29
Aegis Modeler 3D	£48.95
Aegis Videoscope 3D (PAL)	£99.95
Aegis Videoscope Addendum	£24.49
Aegis Videotitler (PAL)	£77.29
Animator Apprentice	£139.95
Animation Flipper	£27.95
Apprentice Lib (Blocks)	£11.79
Apprentice Lib (Geometrics)	£11.79
Apprentice Lib (Flipper)	£11.79
Comic Setter Clip Art Disks	
Funny Figures	£13.95
Science Fiction	£13.95
Super Heroes	£13.95
Amiga Design 3D	£55.95
Forms In Flight 2	£83.95
Pro Video CGI	£11.95
Pro Video Font Set 1	£48.95
Pro Video Font Set 2	£48.95
The Director Toolkit	£20.95
Turbo Silver 3D	£97.95
Turbo Silver Terrain	£13.95
Video Effects 3D	£111.95
Video Generic Master	£48.95
Video Wipe Master	£48.95

DESKTOP PUBLISHING

Pagesetter Lazerscript Driver	£20.95
Publishers Choice	£69.95

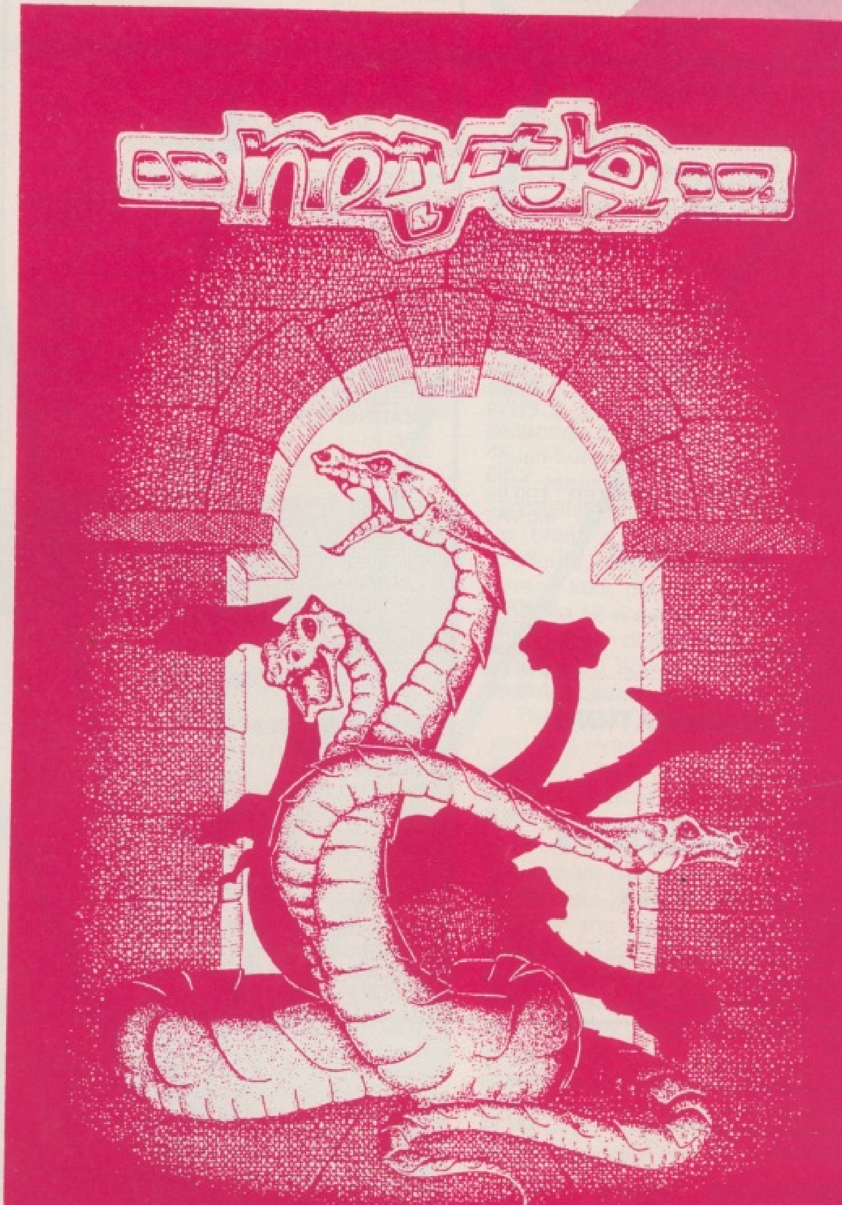
Rainbird Flies Again

Originality is always in short supply. It is easier to steal someone else's idea than produce something new. If this is true in the computer industry as a whole where both hardware and software are normally ripped off just as soon as clone designers can get their fingers on to an original to copy it is certainly true of the retailing where one shop or mail order house is soon so very much like another all that can be seen as the difference between one and the other is a cheaper price. So it is very agreeable to see that even in the harsh and competitive world of mail order selling, someone has the creativity and guts to come up with an idea that offers buyers a little more than just cheapness.

Tony Rainbird is a well-known, liked and respected name in the entertainment software business. For one thing, it is his surname that is carried by what is arguably the most successful label that Telecomsoft (now owned by MicroProse, see story in this CCI) has produced. Don't be confused though by their other labels that also bore the 'bird' names. Tony Rainbird set up that part of Telecomsoft and it remains an area of excellence, especially with the adventures created by Anita Sinclair's Magnetic Scrolls — of whom and which, more later.

Rainbird, the man not the label, left Telecomsoft just over two and a half years ago. He was, he says, frustrated by bureaucracy, the pecking order and the sheer futility of arguing for logic to prevail, and very nearly feels his previous two and a half years there a waste of time.

There are others who would disagree. He certainly helped such excellent products as The Pawn to emerge and he impressed the astute Anita Sinclair enough to take him as an associate of her company.



He is now applying some of the other ideas he must have had during that time in a way whch is clearly being seen as very interesting by growing numbers of games players, especially in the adventure field.

Everybody Loves a Bargain

In under a year, Tony Rainbird has emerged as a force in an area different but allied to the creation of games — the selling of them by mail order. He has started two separate but connected clubs Official Secrets and Special Reserve. Both of these offer software at what are, for anyone walking into Boots or W.H. Smiths to buy entertainment software, extraordinary bargains, really low prices, some less than half the cost of exactly the same game available in those chain stores. It isn't surprising that the Rainbird organisation is beginning to prosper.

However, Tony Rainbird would maintain that his successful operation, reputed to be already one of the largest software retail organisations in the UK., is not founded on price alone, but on communications. For not only do members of the Special Reserve and Official Secrets clubs get software at bargain prices they also receive other privileges such as a very thorough catalogue and a newsletter. This latter is called Confidential and unlike most private publications is well worthwhile reading. It looks as if it were produced on a DTP set-up but it clearly aspires to the status of a magazine. Some of its articles are certainly of professional magazine quality, including in the latest issue an interview with erstwhile CCI columnist Jeff Minter.

Confidential has something that could be appreciated by some , the tone of a fanzine but many may find its unremitting facetiousness a bit too school magazine-ish for their taste. And Commodore readers might think its listing of forthcoming events which mentions the Atari Show but not the Commodore equivalent has its emphasis in the wrong place.

This is surprising for it is clear that Amiga products, including the Official Secrets number one seller, F16 Falcon, substantially outsell ST and C64 games are also a notable part of the clubs' offerings. Nevertheless, it is encouraging to see that a mail order house is coming up with a service which is reputed to take a mere seven days, low prices and also adding value by giving a genuine publication which has particular interest to adventurers.

Myth

It is with this mind that Rainbird is adding an even bigger incentive to new, and old, members of his Special Reserve Club. he is giving away, free, a mini-adventure called Myth written by none other than Magnetic Scrolls (surprise, surprise!). This game takes Greek mythology and embodies it in an adventure which, Anita Sinclair tells us, is not really 'mini' at all.

"It's actually just as good as one of our full length games. it needs just as much skill but it should take you less time," she says. Anyone who has played the brain-teasing adventure like the Pawn and Corruption and Fish that have come out of the fertile minds of the Magnetic Scrolls team will know what that means and no doubt be looking forward to an opportunity to try their latest production.

Tony Rainbird thinks that to give away Myth will be just as big an attraction as the bargain prices his clubs offer. It also is a pointer to the originality that Rainbird brings to his business and how that quality benefits his customers.

He however must be a little wistful to read that the label, owned by Telecomsoft, which bears his name has just been sold off. When he worked for Telecomsoft, he may have been frustrated and defeated by bureaucracy but now with his software clubs and their creative approach to selling he has the cheerful look of a winner about him.

A.M.

ANDY MOSS PLAYTESTS 'MYTH', THE EXCLUSIVE ADVENTURE CREATED BY MAGNETIC SCROLLS FOR OFFICIAL SECRETS MEMBERS ONLY

It isn't easy being a god, especially when you are Poseidon, god of the sea, and you can't even SWIM! Now there is a sight, how can you look godlike wearing red water wings for heaven's sake. It is into this unlikely character that you step when you play MYTH the adventure written soley for Official Secrets Members by none other than Mag Scrolls. All the usual Scolls trademarks are present including the now standard quality graphics and powerful parser along with a high degree of exceptionally witty text.

You can only get into the game by quoting your name and membership number, not forgeting your personal code, and when this is entered you are transported in Zeus' garden party in the sky. Apparently Christianity is on the up and up, which is not good news if you are a God and Zeus in his wisdom has decided that this party is to commemerate a new era for his assembled throng. Pot bellies are a thing of the past, you are told, and fitness is the order of the day. So each God is set a task to prove his mettle, and guess what, you're first off.

Yes, you, as Poseidon, have to steal the Devils Helmet of Invisibility from his Palace in Hades, and before you can say 'ye gods' you are zapped downstairs to the Gates of Hell to begin your task. The puzzles are there right from the off, as you are faced with a fearsome nine headed Hydra guarding the gates to the north, and a strange garden to the east that contains of all things a lamb, a tree, bearing forbidden fruit (sound familiar?) and poisonous flowers and two stones. I am convinced that you need to poison the fruit using the stones to ground out the mixture, before giving it to the Hydra to eat thereby getting through the gates, but for some reason it just will not work.

One things for sure, you can have a lot of fun trying. The Scrolls humour runs throughout the adventure, especially when you try something daft or plainly insane to overcome a problem.

Make no mistake, this adventure is not a sales gimmick, it is a worthy addition to your Scolls collection, with just as much attention to detail as their commercially available product. Now just what the hell does that lamb have to do with anything?

A.M.

More Power to the 64

In part III of his series, Peter Gerrard takes up the screwdriver and goes on to examine the peripherals vital to your 64

Welcome to part three of our grand tour of the Commodore 64. Saying that almost makes me feel like a tourist guide, but there you go. Our first trip covered the keyboard, that was in the May issue, then in June we had a look at all those wonderful pins and sockets that go to make up the outside of the 64. Cartridge slots, joystick ports, all that kind of thing, clever use of which can really expand the 64 in all sorts of directions that I'm sure even the manufacturers never thought of. I know it's asking for the impossible, but I wish there weren't two different types of 64. No, I don't mean the casing, but the American 64s and ours. This is due, as I'm sure most of you know, to the difference in the television systems, the NTSC and PAK being wonderfully incompatible. The first 64 I ever had my hands on was an American one, back in the Autumn of 1982. It wouldn't connect up to a television set, the only monitor we had was black and white and had no sound, which was a marvellous position to be in when reviewing a computer that relied to a great extent on its graphic and sound capabilities. Showing true journalistic resolve the reviews were written, and then re-written when we managed to lure a British 64 out of the clutches of Commodore.

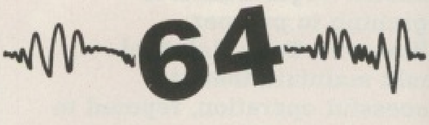
> ***"I took hold of my brand new 64 (grey case having gone to the great computer repair shop in the sky) and sat down with a screwdriver, ready to take action."***

However, we find that the casing does make a difference. This month I was going to talk about the inside of the 64, what all the chips are, what that strange silvery thing is that you can see through the air slots underneath the machine, and so on. I had a nice little opening prepared about the difficulties of getting all the screws out and keeping them safe, since one of them almost always seem to jump to freedom and roll under a settee, never to be seen again. All this was from memory, having taken my old 64 with dark grey case apart many, many times. Introduction written, I took hold of my brand new 64 (grey case having gone to the great computer shop in the sky) and sat down with a screwdriver, ready to take action. What?! Only three screws, what's happened to the rest of them? Why can't I unscrew any of them? Why can't I get into the wretched thing?!

I don't trust memory that much, so the inside of the 64 will have to wait for another month. I just can't get into the beast at all, at least not in the time allowed between illustrious editor ringing up andthis having to go in the post, so I shall keep my nice new 64 intact for another couple of weeks and have another go at getting into it later. In the meantime, we'll swap articles three and four around and look at some of the more popular peripherals that can be connected up to the 64 (dark grey case or otherwise), as well as seeing why some might considered essential by some people and totally unnecessary by others. One man's cassette deck is another man's disk drive, and all that.

We'll start with that which allows the user to see what's going on, namely the television set. Most people that I know have their 64s connected up to a TV, rather than a monitor, as they see no real need for spending the extra money on a dedicated monitor. If you do, Commodore's own is as good as any, and there's no denying that the clarity is improved, but a television is still good enough for most of us.

Years ago, before I hit the high spots of sunny Wigan, the only TV set I possessed was connected up to the 64. I had no television license, because I never watched television at all. Times have changed, but then I really don't watch television. This did not stop the man from the license company coming round to check up on me, but when he saw the television surrounded by things computer, with a spaghetti jungle of wire looped all around it, he belived me. Only when I got a video recorder and a second television did I get a license.



So, if you want to use a television exclusively with the 64, you do not need a license. If you watch a television program (as opposed to a computer one) for the merest second, you do. Some monitors exist that allow you to do both, and the first time I saw such a beast was at John Ryan's house: his name has been mentioned in these pages before. At the flick of a switch, a boring 64 loading screen could transform itself into Dynasty. A nano-second later, we were back to the boring 64 loading screen. A very useful device, if you want to spend the money. Other options include a monitor that allows you to flick from a full colour display to a green and black one. Phillips make such a monitor. This is useful if you're going to be doing a lot of word processing, since green on black is very restful on the eyes. It also helps if you're doing a lot of adventure game playing and reading vast amounts of text for hours on end, but that really is taking computing into the luxury class.

If you're happy with your television, keep on using it. If you want to check the clarity of the picture, just about any arcade game with lots of wonderful graphics will do the trick. Or, try running a short program that prints up reverse field spaces in different colours. For sound, you could again just run a game of some sort that features a

More 64 Power

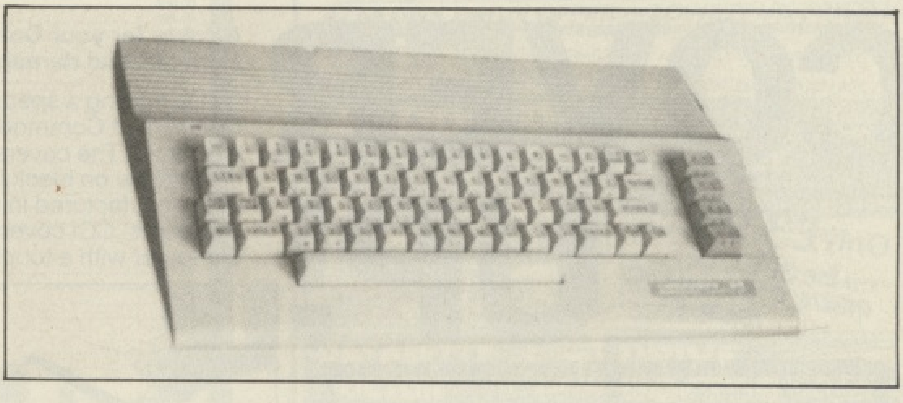
sound track, and tune the television in to perfection as it's playing.

But, with TV sets, a word of warning. This happened to me a couple of months ago, and cost me ten pounds to get sorted, 64 connected up to TV working happily away, end of session, disconnect 64 and re-install television aerial, turn the TV on to check the picture and wham! Nothing, no picture, no sound, just a Tuner snowstorm and no way back. I tried re-tuning the stations, but nothing happened, so fearing the worst the engineer was summoned. About five minutes and ten pounds later, we had the answer. If your television has a reset switch on it (usually underneath the tele), pressing that would have solved the problem. Ours didn't, so the engineer had to reset every station and tune them all in again to the right frequency. I know what the frequencies are now and can do it myself if it should ever happen again, but at the time I didn't have a clue. So, if this should ever happen to you (and according to the engineer it can happen at any time) save yourself a tenner and either reset your television or just tune all the channels in again. I speak from experience!Another peripheral that is commonly encountered is the cassette deck. Nowadays most 64s seem to be sold in packs of some sort (game pack, music pack, that sort of thing) and included in the pack is a cassette deck. Since it's supplied with the computer you might as well use it, especially as you usually get a number of free programs thrown in which are supplied on tape. Indeed, the very first Commodore PETs had an integral cassette deck, so this particular peripheral has a long and honoured tradition as part of the Commodore furniture.

The great thing about Commodore cassette decks is that they shouldn't need adjusting. No fiddling about with volume and tone controls until you get it right and actually manage to load a program, as is the case with other, less fortunate, computers. Then, when you've got the setting right for one program, another requires a completely different one. So, bless the Commodore deck for its reliability at least. This reliability is usually only called into question when certain types of turboloader are being used. They, after all, are doing something that neither deck nor computer were designed for.

> ***"If you want to check the clarity of the picture, just about any arcade game with lots of wonderful graphics will do the trick. Or, try running a short program that prints up reverse field spaces in different colours."***

Most of the time, though, the deck works perfectly happily. You can easily test your own deck by just writing and saving a short program (and verifying it as well, if you want), or saving a sequential file of data and reading it back in again. Tapes saved on your own deck should always work, and if they don't (as happened to me) then it is usually the tape that is to blame rather than the cassette deck. Some tapes are more expensive than others, but as is usually the case the more you pay the better quality you get, and I'd sooner spend a few extra pence than lose a vital program.



In theory, if you remove the tabs at the top of a cassette tape, you cannot then save a program onto that tape. A good way of protecting things, you might think. If that is the case, can anyone explain how I managed to save a program onto just such a tape? The tabs had gone, there was nothing covering them, and yet I somehow managed to save a program onto it! The tape had been left in the deck by accident, another tape should have been there instead, and nothing vital was lost, but how did it happen? Intriguing, Watson, a two pipe problem.

That same sort of problem has never occurred with disks. If the little notch at the side of the disk jacket is left covered up, then I have never managed to write to the disk. Remove the protective tab, and the disk is free for use. It's also an easy matter to cut a notch in the other side of the disk, by placing two disks back to back so that the exposed notch on one disk is resting against covered material on the other one. Using that as a guideline you can carefully (very carefully!) cut a hole in the other disk and use both sides of it, I wouldn't recommend keeping your most important programs on the reverse side of a disk, although I've never lost anything yet, but as a way of backing up a disk it seems as good an idea as any. Backup one side onto the other side of another disk, and vice versa, then if anything should happen to either side of either disk you've still got a copy of everything somewhere.

Something that I definitely wouldn't recommend doing is taking the disk out of its protective jacket. Only once have I seen this done on a working disk (by Martin Maynard of Audiogenic, when disks were a novelty at Commodore and there were not that many of them about — he was just curious as to what the disk itself looked like) and, amazingly, it still worked minus its protective jacket. It didn't look very healthy though, so don't do it with anything important if, like Martin, you can't restrain your curiosity.

Whether you actually need a disk drive or not is, of course, another matter. It all depends what you want to use the machine for, and plenty of 64 owners quite happily survive without a disk drive. If you don't have one and intend getting one, then you probably have some sort of specific purpose in mind. So, I would recommend checking the program that you intend to buy on something like Evesham's fast drive, and if it works then that's the

cont. on next page

MORE 64 POWER!

continued from page 29

drive for you. It's cheaper than Commodore's own, it is much, much faster, and seems to be compatible with 99 per cent of software. But, someone will now go and buy one for a specific program and find that it won't load, so do check first before you part with your cash.

> ***"I would recommened checking the program that you intend to buy on something like Evesham's fast drive, and if it works then that's the drive for you."***

Disk drives can be linked in tandem, which is rather handy as nobody seems to have produced a double disk drive specifically for the 64, and if you graduate from cassette deck to disk drive you soon find that you wish for a double disk drive. The only solution is to get a second single drive and change the device number of one of them, but at least it works.

Somewhere at the end of this chain of peripherals there usually lies a printer. Again, whether you buy one or not is up to you, it all depends on what you want to use the 64 for, and as with disk drives there is an amazing choice of printers on the market. You don't have to stick to Commodore ones, although there is always the problem of getting the correct interface with anything that is non-Commodore. Still, what's another collection of wires, plugs and sockets?

If you do buy a printer, there is the added problem of deciding which one to choose. Commodore's own are all very well, but the quality is usually a bit suspect. That's a minus point, but on the plus side you can usually manage to print out the Commodore character set. So, if you're just happy to be listing out programs or playing Infocom games and getting a transcript of your progress then there's nothing wrong with a Commodore printer. If you want to write snappy letters and do all manner of desk top publishing tricks, then you'd probably need to spend a few more pennies and get something more suited to the job. As with the disk drive, try before you buy. It's your money, not the salesperson's, so only get what you want, not what they want you to get.

Well, that just about covers most of the commonly found peripherals for the 64. Obviously there are many more (joysticks, cartridges, etc.) but they will have to wait. Now, screwdriver in hand once more, here we go for next month's article ... bye!

P.G.

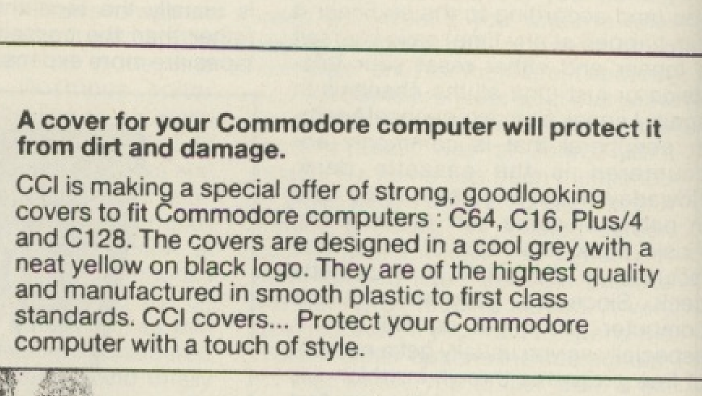
COVER UP!

Only £3.99 for the C64, C16, Plus/4, C128 and 64C (all + 75p P+P)

A cover for your Commodore computer will protect it from dirt and damage.

CCI is making a special offer of strong, goodlooking covers to fit Commodore computers : C64, C16, Plus/4 and C128. The covers are designed in a cool grey with a neat yellow on black logo. They are of the highest quality and manufactured in smooth plastic to first class standards. CCI covers... Protect your Commodore computer with a touch of style.

Please send me .... covers for my
C64 ☐ C16 ☐ Plus/4 ☐ C128 ☐ 64C ☐
I enclose cheque/P.O. payable to Croftward Ltd
for £...........
Please charge my
Access Acc No ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
Name ....
Address ....
....
Postcode ....
Send to: CCI Cover Offer 010
Commodore Computing International
40 Bowling Green Lane
London EC1R ONE
Allow 28 days for delivery



but on
manage
aracter
e listing
nfocom
of your
wrong
ou want
do all
tricks,
pend a
nething
he disk
s your
so only
ey want

nost of
als for
y more
ney will
n hand
next

P.G.

ct it

/4
n a
lity

I·C·P·U·G

the Independent Commodore Products Users Group is the largest and most friendly computer club in the country

- Many local groups with regular meetings
- Superb newsletter magazine with an average of 90 pages, bi monthly
- Back issues 1988 available to all. £2.00 each
- We support all CBM, Pet, Vic 20 and all Amigas
- FREE Software Library of PD programs for all machines
- Over 300 disks of Amiga PD software available free to members plus p&p
- Help and Advice. Discount scheme
- Subscription only £13.00, 1989 per year (UK) plus £1.00 joining fee
- Before applying for any software please wait for your membership details to be sent to you
- Overseas prices on application

If you are seriously interested in using or programming any Commodore computer, then joining ICPUG is a must!

For full details, send a stamped addressed envelope to:

ICPUG Membership Secretary, Jack B. Cohen,
32 Brancaster Road, Newbury Park,
Ilford, Essex, IG2 7EP
01-590 8849 Day — 01-346 0050 Even & W'ends.

OFFICIAL COMMODORE/AMIGA DEALER

	£
COMPUTERS	
Amiga B2000 only	1029.00
Amiga B2000 + 1084S Stereo Colour Monitor	1279.00
Amiga 2088 PC/XT Bridgeboard + 5.25" Drive	481.85
Amiga 500 inc TV Modulator	359.00
Amiga 500 + 5 Games + Spritz Paint + Superbase	399.00
Amiga 500 + 1084S Stereo Colour Mon	619.00
Amiga 500 + Philips 8833 Stereo Col Mon	589.00
Commodore PC1 Single Drive Mono	332.35
Commodore PC10/20/40/60	PHONE
Commodore 128D Desktop	379.00
Commodore 64C Hollywood Pack	139.99
Commodore 64C Entertainment Pack	189.00
PRINTERS	
Citizen 120D Parallel or Commodore	129.95
Star LC-10 Parallel	189.00
Star LC-10 Commodore inc lead	215.00
Star LC10 Colour Par or Comm	245.00
Star LC24-10 24 pin Multi-font 170/57cps	329.00
All Oki 20 consumables normally in stock	PHONE
MONITORS	
Commodore 1084S Colour Monitor inc lead	279.00
Philips 8833 Stereo Colour Monitor inc lead	239.00
Tilt/Swivel Stand for 1081/1084/8833	18.34
Philips 7502 Green Screen Monitor	85.00
MISCELLANEOUS	
Amiga 501 512K RAM/Clock Expansion	139.00
Amiga 500 AMDRIVE 40Mb Hard Disk Drive	399.00
miniGEN Genlock for Amiga	113.85
Pace Modem + S/ware for Amiga V21/23 Prestel, BBS etc	239.00
Commodore 1541-II Disk Drive + Games or GEOS	159.00
Commodore C2N Data Recorder	29.95
Cumana CAX354 Amiga Disk Drive	95.00
Power Supply for C64	26.45
Super-G Cent I/F + Graphics C64/128	34.95
Surge Protector 13A Plug	12.95
Surge Protector 3-Way Adaptor or 4-Way Dist Unit	15.95
C128 Official Prog's Ref Guide ... p&p £2	24.95
SOFTWARE	
Superbase Personal	49.95
VizaWrite 128 + Spellcheck	59.95
VizaStar 128 Spreadsheet & Database	79.95
Superbase 64/128	24.95/29.95
Superscript 64/128	24.95/29.95
Tasword 64 40/80 Col WP—Tape/disk	24.95/24.95

ALL PRICES ARE INCLUSIVE OF VAT AT 15%
CARRIAGE £5 (EXPRESS £10). SOFTWARE AND SMALL ITEMS FREE
Prices subject to change without notice ***E&OE***

Delta Pi Software Ltd

8 Ruswarp Lane, WHITBY, N. Yorks. YO2 1ND.
Tel: 0947 600065 (9am-7pm)

NEW FROM TRILOGIC

BACK-UP AND TRANSFER PROGRAMS
FROM DISK TO TAPE TAPE TO DISK
DISK TO DISK TAPE TO TAPE

FASTER THAN WARP 25!
TRILOGIC

WITH THE NEW
'ROCKET POWERED'
Including V3.2R Software
Expert
CARTRIDGE

ONLY £31.99 POST FREE
state disk or tape when ordering.

COMPLETE BACK-UP SYSTEM
MAIN FUNCTIONS
- Freezes all Programs.
- Creates a back-up onto Disk or Tape. Regardless of whether the original was loaded from Disk or Tape.
- Independent tests show the Expert to have the most effective compactor so you can save more games per Disk and have faster reloading.
- Saves a back-up in one file.
- Expert is not needed for reloading a back-up
- Programs reload in less than 10 seconds using New Rocket Loader.

UTILITY FUNCTIONS
- Sprite Saver & Editor with 'Animator'
- Infinite Lives Command
- Joystick Autofire mode — even better than Autofire Joysticks
- Joystick Port Swap — Your back-ups can use the same port.
- Powerful & Professional 64k M/Code Monitor
- Printout Hires & Lores Screens.
- Expert Express — Use the Expert as a Disk Turbo Loader.

ROCKET — A SUPER-FAST DISK TURBO LOADER
- Loads independently of the Cartridge.
- Reload on average back-up in 6 seconds.
- Loads any size of file. • One file format.

EXPERT UPGRADE V4.1R

* * * SPECIAL OFFER * * *
EXPERT + V4.1R SOFTWARE
£39.99 post free
(on disk only)
(V3.2R software on disk or tape is supplied with THE EXPERT for £31.99.)

V4.1R IS A FULLY INTEGRATED MODULAR OPERATING SYSTEM FOR YOUR EXPERT.

BRAND NEW!

V4.1R UPGRADE
£9.99 + 75p p&p
(on disk only)

MAIN FUNCTIONS
- Fast save back-up of a Program.
- Machine code monitor with function key commands & bidirectional scrolling.
- Character editor — edit in real time and restart the Program.
- Picture editor — edit in real time & restart the Program.
- Sprite editor — edit in real time & restart the Program.
- Utilities — Sprite immortaliser, joystick autofire. Joystick fort swap, etc.
- Hard copy — screen dump utility.

OTHER OUTSTANDING FEATURES
- AUTOREPROGRAMMING — NOW, just like other cartridges, you never need to reload a game when switching from one module to another. The EXPERT can be reprogrammed as and when necessary without the computer having to be reset or the current program in memory being disturbed or having to be reloaded.
- UNLISTED OP-CODES. Probably for the first time ever. unlisted op-codes can be disassembled by the EXPERT's powerful, professional machine code monitor.
- COMPREHENSIVE 50 PAGE instruction manual.

C64 DISK DRIVE OFFER — LOWEST UK PRICE!

OCEANIC OC118N DISK DRIVE FOR C64/128..................ONLY **£118.99** *POST FREE*
Highly compatible, 5¼", 160k formatted, separate psu.
SPECIAL OFFER OC118N + EXPERT WITH V3.2R SOFTWARE .**£148.99** *POST FREE*

64 DOCTOR
A professional diagnostic CARTRIDGE for your C64.

COMPRISES, 64 DOCTOR CARTRIDGE, USER & SERIAL PORT TESTERS, AND —
FREE
— The only comprehensive fault diagnosis and Repair Guide available.

TESTS:
- Keyboard
- Serial Port
- Cartridge Port
- Kernal Rom
- Video Chip & Video Banks
- NMI & IRQ Interrupts
- Cassette Data
- Joystick Port
- User Port
- Basic Rom
- CIA Chips
- Sound Chip
- Cassette Key Press
- Even tests your Joystick

£19.99

- Explains step by step, how to locate faults and identify chips.
- How to dismantle the keyboard.
- Includes Commodore part number guide
- Full of tips and hints many known only to the trade.
- How to desolder chips the professional way.
- Written by professionals with a vast knowledge of 64 faults and repairs.

DATASETTE DOCTOR £9.99
THE ONLY COMPLETE DATASETTE SERVICE & ALIGNMENT KIT.
- Check and adjust alignment
  Two Tests with very precise adjustment.
- Check Datasette Circuitry
  Shows up electronic faults.
- Check for Electrical Interference
  Shows up noise from TV's & main wiring.
- Check Saving Performance
  Special high Baud rate saving test.
- Check Loading Performance
  Special Turbo loading test.
- Clean & Demagnetise Tape Head.
  Cleaner/Demagnetiser supplied.

DRIVE DOCTOR £15.99
With this complete kit you can check:-
- HEAD ALIGNMENT —
  Unique test makes accurate setting easy.
- HEAD MOVEMENT — Shows up wear and friction.
- BACK-STOP SETTING -Critical but easy to adjust.
- MOTOR SPEED — Show speed errors.
- ALSO shows up free play & faulty S/motor.

COMES COMPLETE WITH PROGRAMME TAPE, SPECIAL ALIGNMENT DISK AND FULL INSTRUCTIONS.

FREE CATALOGUE WITH EVERY ORDER!*

HOW TO ORDER — SEND PAYMENT BY CHEQUE, MADE PAYABLE TO TRILOGIC, PO, BANKERS DRAFT, CASH BY REGISTERED POST. CREDIT CARD HOTLINE FOR ACCESS AND VISA. ADD £2.99 EXTRA FOR EXPORT ORDERS, PAYMENT IN STERLING ONLY PLEASE.

Please add 75p part postage + packing to orders under £15.00

EXPRESS DELIVERY £1.99

TRILOGIC,
Dept C.C.I Unit 1,
253 New Works Road, Bradford BD12 0QP
Tel 0274 691115 · Fax 0274 600150

· FAST MAIL ORDER SERVICE · PROMPT DESPATCH ·
ALL PRICES FULLY INCLUSIVE PLUS 10 DAY MONEY BACK GUARANTEE ON ALL ITEMS

CBM launches The Primary Project

"All the children have been extremely enthusiastic. Children with quite severe learning difficulties are suddenly on an exciting par with their peers. So far the Amiga 500 has brought out qualities in some children that I did not know existed"
Richard Adams, a teacher at Holway Community Junior School, commenting on his class of eight and nine year-olds' reactions to working with an Amiga computer.

Commodore Business Machines has launched The Primary Project, in which the preliminary stage — lasting nine months — assesses the potential of the Amiga 500/2000 as a teaching tool in primary schools. A pilot project has been running since January this year in Somerset, Norfolk, Humberside, Berkshire and Cheshire. The Primary Project is being extended to further regions on LEA request.

The Primary Project will be looking towards issues such as the National Curriculum and how computers fit in with its requirements. A study running alongside will look to the implications of LMS on school administration.

The project is being supervised by Commodore's Wiesia Okon — of their Education Division — who has brought her experience as a teacher to the running of the programme. Peter Talbot, National Sales Manager for the Education Division, said of The Primary Project's aims: "It came into being to evaluate the Amiga and its schools related software. The most important element was to find out how the children got on with the Amiga so that we can make it as easy as possible for teachers to blend it with their everyday teaching practices".

The Amiga 500s have been supplied to the schools with 1Mb of memory together with open "toolbox" software, such as wordprocessing — the sort of software currently being recommended for use in Primary Schools.

The two main programs being used are Electronic Arts' Deluxe-Paint II and The Disc Company's wordprocessor — Kind Works — which can be used together to combine text and graphics allowing for simple DTP to support the children's work in the primary classroom.

Following the formal launch of The Primary Project, Ian Hollingsworth, the Headmaster of Tivetshall County Primary School in Norfolk said of the school's initial findings on the Amiga 500: "I have found the children to be less inhibited than adults in their use of the computer. The Amiga's mouse has made it very accessible for pupils with the art package — Deluxe-Paint II — creating a discussion point for lessons".

Ian Hollingsworth has also been using Commodore's BBC Emulator so that the school can continue to use its BBC software on the Amiga 500. "We have roughly 250 BBC programs in the school and that represents a sizeable investment which we do not want to lose", says Ian Hollingsworth. The BBC Emulator allows the Amiga to emulate the BBC Micro and run BBC programs.

Tivetshall Primary School has also been using Gold Disk's Moviesetter to create simple animations. Ian Hollingsworth notes that the animation package has generated a lot of interest among the school's older children.

Wiesia Okon said of the Amiga's impact in the classroom: "I have found that the children are expressing themselves through the computer on a number of levels — as well as actually doing something such as painting on the Amiga — there is always a lot talking and discussion going on around the machine. The stimulus that the Amiga can give to encourage group work fits in well with the IT philosophy of Primary Education. The computer enhances and complements the work already down by teachers and pupils in the classroom".

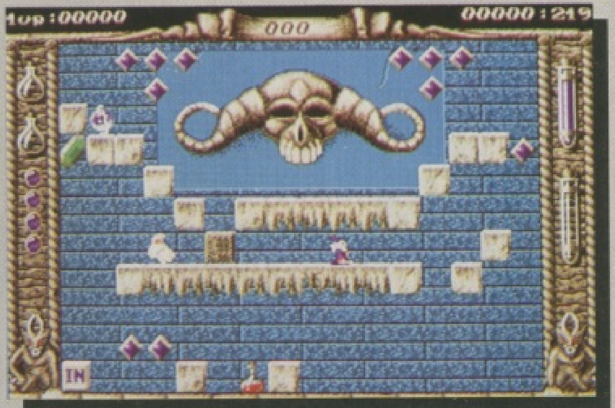
s

o use
500.
rams
nts a
o not
orth.
miga
l run

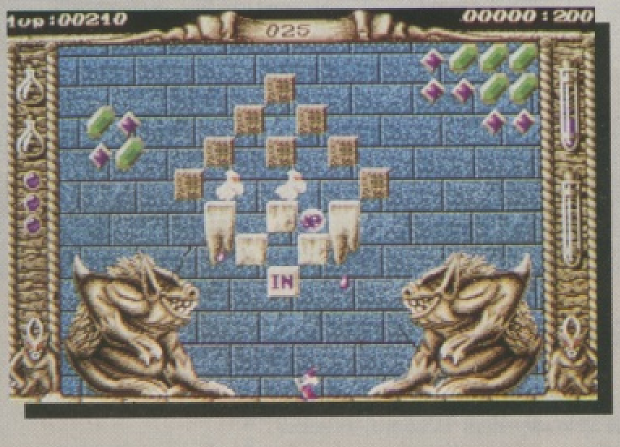
also
etter
Hol-
ation
of in-
older

iga's
have
ress-
puter
ll as
n as
re is
ssion
The
re to
with
uca-
and
lown
the

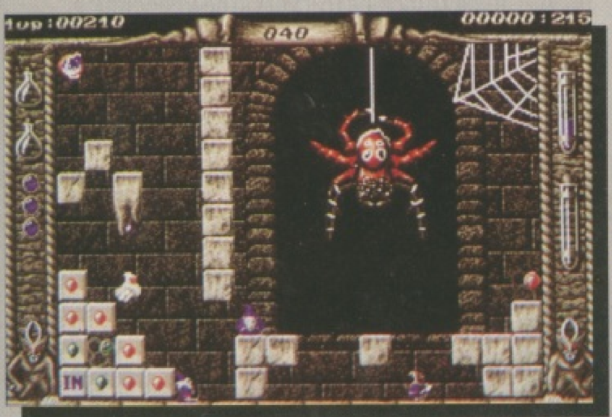
Spherical



Screenshot ATARI ST



Screenshot ATARI ST



Screenshot ATARI ST

SPHERICAL

Magic and Logic, Skill and Intelligence. SPHERICAL is a game of contrasts. Keen perception and instinct are required whenever the magician overcomes the law of gravity with his magical powers.

Breath-taking graphics, more than 200 different levels, 2 player team mode, dozens of hidden secrets and 10 giant sized animated super monsters. SPHERICAL shows what your computer can do.

The editor of POWER PLAY awarded Spherical 84 points and classification "Highly Recommended".

Rainbow Arts

Available for CBM 64, Amiga, Atari ST and PC compatibles.

CBM 64	Cassette	£9.99
	Disk	£12.99
Amiga		£19.99
Atari ST		£19.99
PC		£19.99

Rainbow Arts, 65 Sketty Close, Brackmills Business Park, Northampton NN4 0PL

SWANSEA UNIVERSITY EXAMINED THE COMMODORE AMIGA

HERE ARE THE RESULTS

When Professor Peter Townsend of Swansea University made a comparative study of personal computers for undergraduate teaching, his findings were conclusive. Namely an order for 40 Commodore Amigas.

"Only the Commodore Amiga fulfilled all our selection criteria" says Professor Townsend. "It combines power and versatility with ease of use. Most important it offers extraordinarily rich graphics. It's very much a *creative* computer, ideal for our varied purposes. Thankfully it is also available at a price that suits our budget."

Our Education Initiative is converting more and more educationalists to Commodore computers. Keen pricing, fast delivery, thorough back-up assistance and a comprehensive range. We offer the total package.

If you're looking to invest in new generation computers for your school or college, make sure you include Commodore in your calculations.

Call our Education desk on 01-873 9823 and ask for full details of the Commodore Education Initiative.

We believe you'll reach the same conclusion.

Commodore

WE'LL HELP YOU SEE THINGS DIFFERENTLY

The Directory!

The Directory! is a comprehensive buyer's guide to Amiga products, both software and hardware. The information it contains has never before been assembled in one publication, making it an absolute must for any Amiga user.

For the up-to-date information on what is available in Graphics, Sound, Business, Utilities, Printers, Monitors and of course Games and much more. The Directory! is the one single source of the what, how, where and how much of the Amiga Dimension.

The Directory! is published by Croftward the creators of Amiga User International and will hit your newsstand in June, price £2.

Fill in the coupon now, and get a priority copy of The Directory! rushed to you post free!

To: Amiga User International Magazine, Finsbury Business Centre, 40 Bowling Green Lane, London EC1R 0NE

Please rush me my own copy of the Directory!

I enclose my cheque/P.O.* for the value of £2. Made payable to 'Croftward Limited

Name____________________

Address____________________

AVI 1

The Directory!

No Amiga is complete without one!

MICROPROSE FLYING HIGHER

Major Bill Stealey and Stewart Bell, Microprose high flyers.

Microprose, once known only for its simulation style games and the piloting and publicity talents of its co-founder Major Wild Bill Stealey has now flown up to an even bigger role in world computer entertainment by buying Telecomsoft, the British Telecom-owned software company.

One of the U.K.'s biggest games houses and previously run by Paula Byrne who has not joined Microprose 'by mutual agreement', Telecomsoft has generally been regarded by software industry observers as amounting totally to much less than its separate parts. Even with excellent products such as the highly-awarded Sentinel, the world-famous Elite and their Rainbird label's Oskar-winning Pawn and Guild of Thieves, plus the immense resources of British Telecom, one of the largest corporations in the world, Telecomsoft was always a disappointing company which many thought, should have achieved leadership of the software industry.

In some cases, it was worse than disappointing. Star Trek, boosted to the stratosphere never - even appeared on all formats - and was a flop on those that did come out. That was typical of the Telecomsoft which never seemed to know where it was going or what identity it was seeking.

There have been rumours for some time that major changes were afoot for Telecomsoft but the denials were frequent. There was a story that the U.S. subsidiary, Firebird Licencees attempted to buy itself out but that was squashed by its closure and the distribution of Telcomsoft's games in the U.S.A. handed over to Activision. Many scratched their heads at that for was not Activision one of Telecomsoft's major rivals?

Then came the rumour that in the U.K. the team led by Paula Byrne had tried to buy the company from Telecomsoft but had not been able to raise the cash. More denials. . .

Finally comes the announcement that Microprose, a company that was hardly known of on this side of the Atlantic a few years ago has stepped in and resolved Telecomsoft's fate. It is reputed to have a paid something under £2,000,000 for the privilege and Stewart Bell, Microprose U. K. boss who will run the expanded operation must be chortling for the inherent value of the product list that Telecomsoft possesses with world renowned games like Elite which offer all sorts of opportunities for exploitation far beyond simple computer games must be immense.

BIG TIME

Microprose, having acquired Telecomsoft, which is estimated in 1988 to have achieved, in spite of its problems, over £10,000,000 turnover now has become one of the big time world powers in the entertainment software business. As one of the top three, with U.S. Gold and Ocean, in the U.K. , it eclipses Activision who are still suffering from corporate losses of substantial proportions and there is no-one else who can challenge it.

"Microprose Magic"

"This is, by far, the biggest deal in Microprose history ..." Microprose president Bill Stealey said. "The addition to Telecomsoft from British Telecom will double the size of Microprose Europe, making it the second or third biggest entertainment software publisher in Europe, It also has the potential to increase the growth of Microprose U.S.A. by 40% — and that's over and above the normal growth rate we've projected for this year."

Stealey says that Microprose will market between 6 and 12 products from Telecomsoft design teams every year and six to eight during the remainder of 1989. "We'll put the Microprose marketing and sales magic into them and give them the attention they deserve."

For those in the software industry who are admirers of the way that Microprose dedicates itself to bringing out quality products even at the expense of time and money and of the way that the Stealey-Bell partnership has built the Microprose organisation in Europe, the U.S. and Australasia (even in Japan, there is Microprose office now) without compromising that quality, the take-over of Telecomsoft can only be regarded as a good thing. It is not some American company grabbing a piece of British heritage like moving the old London Bridge out to the Nevada Desert. Microprose can now be considered a local organisation that will, by its expansion, enable better standards and more enjoyable games to be produced at reasonable prices for distribution worldwide. Now that can't be a bad thing, can it?

Z. M. S.

Back To Commodore Basics Part II

By now you should have lines 280 to 360 of the first program in the suite we will be covering in this series of articles safely stored away on disk. Tape users can also follow the series, but changes will have to be made. We will describe those when we come to them. This first program is called MENU, for it is this one which will allow the user of the database that we are building up to select whatever option he or she requires. The screen display that we are aiming for eventually is something like as shown in figure one.

Although we only entered nine program lines last time, you may well have made one or two typing errors while doing so. Such simple mistakes as missing out the R in PRINT are spotted by the computer, and any attempt to run the program will cause the Syntax Error message (literally, an error in your syntax as far as the computer is concerned) to appear. At the end of last month's article I suggested that you simply re-type the line if you've spotted any mistakes, but there is an easier way.

To edit a program line we use the keyword LIST if it has vanished from the screen. Alternatively we can use the cursor keys if it is still there and move the cursor so that it is lying over the line. If you load the program into your computer's memory with load "menu", 8 and list it with the keyword LIST, we can see all nine lines of it. To list a specific line, say line 310, you would enter LIST 310 and press RETURN or ENTER as usual. Suppose we had made a mistake in line 310 and wanted to correct it. By typing LIST 310 you will see line 310 appear as before, with the cursor (the little flashing blob) sitting underneath it. The cursor movement keys are the arrowed ones over on the right hand side of the keyboard, and we can use these to move to any part of the line. Then, if we wanted to insert some additional text, we would just hold the shift key down and press the DEL key to make some space, then type it in (SHIFT + DEL means INS or insert). To delete some text we would use the delete key to delete characters to the left. Experiement by altering line 310, pressing the RETURN key when you are satisfied with your changes. Just ensure that it is back to its original form before we carry on!

By running our nine line program you will see that a box is drawn on the screen before printing it, and fortunately there is a command in Commodore Basic for doing just that. What we would also like to do is to change the colour that is currently being displayed by the 64. That is, the colours of the main window, the border that surrounds it, and the text that is being displayed on the screen. The standard colours that come on when we switch on the 64 ar very drab, and a few changes are usually called for. We'll do all this by adding a few lines, and explaining them afterwards.

Type these lines in now, adding them to those already in the computer's memory, and when you have done so save this revised version of the program with SAVE "Menu",8. The old version will be replaced on disk with this new one, although we are still some way from finishing it.

There are the four variables, in two program lines, with an additional line to give our program a name:

```
20 REM MENU for Commodore
Database
30
CL$=CHR$(147):CH$=CHR$(19):
PRINT CHR$(158)
40        REV$=CHR$(18):ROF$=C
HR$(146):POKE       53281,0:POKE
53280,0
```

What we have done here is to define, in line 30, a variable for clearing the screen *CL$* and one for moving the cursor to the top left hand corner of the screen *CH$*. This is followed by printing CHR$(158) for changing the text colour to yellow: the value of 158 comes from the manual accompanying your 64. Line 40 gives us two additional variables for turning reverse print mode on *REV$* and turning it off again *ROF$*. We will make use of these later on when we add some more lines to our program. At the end of the line there are two unfamiliar POKE commands.

POKE allows us to alter the content of various memory 'locations' within the 64. Some of these locations are quite important, so make sure you type the numbers in exactly as shown above. Memory location 53281 allows us to alter the colour of the screen, 53280 does the same for the border. By using a number in the range 0 to 15 we can thus choose any of the standard set of 16 colours that the 64 is supplied with. Try experimenting with different numbers until you find a set of colours that takes your fancy.

Before carrying on with some more of this first program we need to explain an important programming concept, and that is the concept of arrays.

So far we have only discussed two types of variables, numeric and string. There are others which we shall discuss when they crop up, but all maintain one distinction: they are single variables. Thus we might have ×=25, name$="fred", ×1=26, and so on, but they are all single variables. This is where arrays come in. Often it would be convenient to have, say, ten different variables with × as the opening letter, referring to ten different situations. We might have **×0=25, ×1=26, ×2=27,** upto **×9=34.** But, as I'm sure you can appreciate, manipulating

continued on page 39

Never mind the best of the rest, Get your hands on the best of the BEST!

Best (UK) Ltd, the Amiga business software specialist, proudly presents a range of products designed to enhance the control and improve the performance of your business.

Plan/IT - probably the best spreadsheet in the world.

Best Business Management - not one, but three different levels of integrated accounting, one of which should be perfect for your business. (Not suitable for Monty Python trained accountants).

Network - undoubtedly the best (that word again!) network package for the Amiga.

Excalibur - data management so simple, so sophisticated that you could rule the world (along with the other millions of Excalibur owners).

Spritz - let your mouse out of the trap with our graphics/art package.

See us on Stand 46 at the Commodore Computer Show on 2nd-4th June.
(Dealer enquiries welcome).

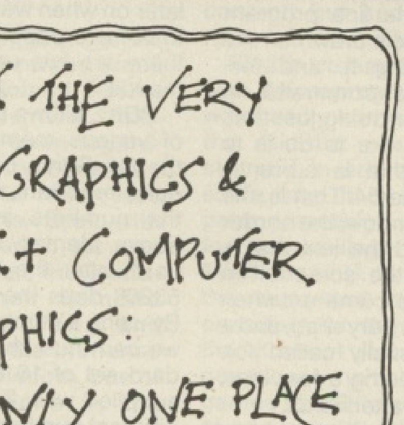
Best (UK) Ltd, Block 3 Unit 1,
Baird Avenue, Strutherhill Industrial Est.,
Larkhall, Strathclyde ML9 2PJ.

BEST
U.K. LIMITED

IF YOU WANT THE VERY BEST GRAPHICS & ARTWORK + COMPUTER GRAPHICS: THERE'S ONLY ONE PLACE TO CONTACT

9 GREENMOOR ROAD,
ENFIELD, MIDDLESEX,
EN3 7HJ.
TEL. 01-804 5096.

RICO GUSMAN



the Cool Art co.

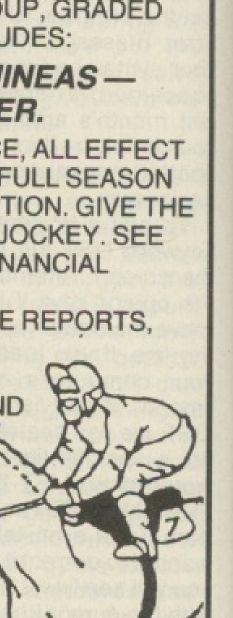
THE RACING GAME

**THE SUCCESSFUL SPECTRUM GAME
NOW AVAILABLE ON COMMODORE 64/128**

AN EXCITING GAME DESIGNED FOR THE HORSE RACING ENTHUSIAST.
MANAGE 15 HORSES TO WIN GROUP, GRADED AND OPEN RACES. SEASON INCLUDES:

THE DERBY — 1000/2000 GUINEAS — THE OAKS — THE ST. LEDGER.

FORM, FITNESS, GOING, DISTANCE, ALL EFFECT RESULTS. TRAIN YOUR HORSES. FULL SEASON OF 80 RACES OR QUICK GAME OPTION. GIVE THE RIDING INSTRUCTIONS TO YOUR JOCKEY. SEE YOUR SEASONS RESULTS AND FINANCIAL STANDING.
FULL BETTING MARKET, PRE RACE REPORTS, STEWARDS ENQUIRIES, RENAME HORSES, RACES OVER 5F TO 2½ MILES. WATCH THEM RACE AND CHEER HOME YOUR HORSE



**COMMODORE TAPE £7.95
COMMODORE DISK £8.95
SPECTRUM TAPE £6.95**

**AVAILABLE BY MAIL ORDER ONLY
SEND CHEQUE/P.O. TO:**

TANGLEWOOD SOFTWARE
DEPT CCI
157 WARWICK ROAD
RAYLEIGH
ESSEX SS6 8SG
Proprietor: J MOSS

Back To Commodore Basics

continued from page 37

this many variables can become tedious in the extreme, which is why we have arrays.

Before we can use one, we must first of all dimension it. That is, tell the computer how much room the array is going to take up in memory. If you remember our box analogy from the first article in this series, what we are doing when we dimension an array is to set aside some room at the right hand end of our box, room which other variables cannot encroach on. The syntax for doing this is:

```
DIM array(number)
```

where array is the name of our array, and number is the number of different variables that are going to make up the whole array. So, to replace our ×0, ×1 etc. mentioned earlier, we would:

```
DIM ×(9)
```

and now we could have ×(0)=25, ×(1)=26, up to ×(9)=34. Now, if we wanted to increase the value of each variable in the array, or element as they are known, we could do this with a single FOR ... NEXT loop. Like this:

```
FOR I=0 TO 9:X(I)=X(I)+1:NEXT
```

Far easier than saying:

```
X0=X0+1:X1=X1+1:X2=X2+1:X3= ...
```

Note that we can have a numeric variable X, a string variable X$, and an array x( ) all at the same time. The computer knows to differentiate between all three of them.

One of the computing 'rules' governing an array is that you only have to use the DIM statement if the array is going to ×(10) or beyond, so in the example given earlier, strictly speaking we did not need to use the dimension statement. Less than this (going up to ×(9) for instance) and you don't have to bother, as the computer sets aside space for a maximum of ×(9) unless you tell it otherwise. Just to add to the confusion, the computer regards the first element of an array as being ×(0); ×(1) is the second element as far as it is concerned. This need not confuse us, however, for in the program lines that we will be getting to shortly we will have an array name$ containing ten string variables. We will refer to the first one as name$(1), leaving the computer to worry about name$(0). We will not bother with it.

Obviously we are going to have to have some information to put into our array, and in the case of our menu program this will consist of the names of the options available to the user of it. Selecting the options, and the BASIC commands associated with that, will have to wait until next month. For now we will content ourselves with producing a screen display that looks like figure one.

In computer-speak, information is often referred to as data, and therefore you may not be surprised to learn that the keyword associated with data is DATA.

One example of its use is in three further lines to add to our program:

```
450 DATA "DEFINE RECORDS",
"DISPLAY RECORDS", "ADD RE-
CORD", "DELETE RECORD"
450 DATA "AMEND RECORDS",
"SEARCH RECORDS", "SORT RE-
CORDS", "SWAP RECORDS"
460 DATA "PRINT RECORDS",
"QUIT"
```

That should tell you about just some of the things that we will be covering during this series of articles, but the mysteries of searching and sorting records, filing them away on disk for later use, using different print formats to display them, and more, must wait for future months.

Data statements need not necessarily be of the form shown here. For string variables, everything is enclosed with quotation marks because that is the form requried by the computer. If we were going to use some sort of punctuation: **"Define, or Alter, Records".**
Letters without punctuation don't matter, so we could have had:

```
440 DATA DEFINE RECORDS, DIS-
PLAY RECORDS ...
```

and so on, but it is good practice to get into the habit of using quotation marks whenever string data is being set up, otherwise errors can easily creep into your programs. If we were using numeric variables, then no quotation marks are required and we could have something like:

```
440 DATA 1,2,3,4,5,6,7,8,9
```

or whatever. If you have altered line 440 at all, get it back to its original format and we will consider the Basic keyword that allows us to read this data into the necessary array.

We said that we were going to be reading data, and since this language is known as Basic, after all, the keyword we will use is READ. Like this:

```
370 FOR I=1 TO 10:READ NA-
ME$(i):NEXT
```

As a temporary diversion, without really realising it we are witnessing here another important fact about line numbers within a program. We can type these lines of program code into the computer's memory in any order we choose, but it will always sort them out into strict numerical order, as the LIST command will quickly reveal.

Back to READ. We could have entered line 370 in a slightly different way, by having something like:

```
370 READ
NAME$(1),NAME$(2),NAME$(3) ...
```

etcetera, but that is wasting the power of arrays. What it does illustrate, though, is that data **must** be read into the array in the order in which it is found in the data statements.

Many errors are caused by reading string data into a numerical array, or the other way around, and errors of that sort are often very difficult to track down. Try to keep your data statements at the end of your programs, so you can always study them if an error should arise, and try and keep those parts of the program that read the data grouped closely together, again so that you can check and compare both READ and DATA to find out where the error may lie.

In this instance the data is indeed at the end of the program, and our READ statement is in the next to last subroutine, also near the end of the program. The last what?

To explain what a subroutine is, we shall now add three lines to the start of our program. After typing these in, save the latest version of this program to disk with **save "menu",8** before carrying on. It would be a shame if a power failure happened to coincide with reading this article, and you lost all the additions that we have so far made ...

```
50 DIM NAME$(10)
60 FOR I=1 TO
24:CR$=CR$+CHR$(29):CD$=C
D$+CHR$(17):NEXT
70 GOSUB 230
```

Line 50 is the dimension statement for the array name$, since we are going to be using ten elements of an array and we must dimension it. Line 60 helpfully sets up two variables which we will be using in line 430.

Then we have line 70: GOSUB 230.

Back To Commodore Basics

This means stop obeying computer instructions in order of line number, and go to the subroutine (or short sub-program) which commences at line 230. When, and only when, you reach the end of the subroutine can you come back here and carry on at whatever comes after line 70. As we shall see next month, this is line 80. If line 70 had contained additional information, such as **70 GOSUB 230:PRINT "HI THERE!"**, on returning from the subroutine the words **HI THERE!** would be printed out. In other words, after returning from a subroutine the computer obeys the very next instruction it can find. However, our line 70 just says **GOSUB 230** and nothing more.

How does the computer know when to return from a subroutine? When it encounters the keyword **RETURN**, which in our case is in line 420:

```
420 RETURN
```

You must match GOSUBs with RETURNs. For every GOSUB there has to be a corresponding RETURN statement, so that the computer knows how to keep track of where it is currently operating within the program. In our case, we go to line 230, and this is the start of the subroutine that prints up the opening part of the screen display above the box. The computer then obeys, in numerical order, the instructions it finds after this first line, and continues to do so until it encounters the RETURN statement in line 420. Subroutines are especially useful if your program is going to be performing the same set of steps on a number of different occasions. Rather than type out the instructions again and again, you can just use one subroutine to perform the same task over and over again.

We will be considering four more keywords in this month's article, and the five further lines of code that we are going to enter will conclude the entertainment for this month. Here, you will see how it is possible to jump out of a subroutine to go to another one. As long as you are careful to match GOSUBs with RETURNs, no harm will be done.

The first keyword is concerned with strings. In order to get our nice, neat boxed display, we need to put the correct number of dots after each piece of text. So that we know how many dots to put, we need to know the length of the string. This is done using the **LEN** command, used in the form A=LEN(NAME$). If NAME$ were equal to "Peter" then the length of it would be equal to 5, since it contains the five characters P, e, t, e and r.

In our case, we want all the strings to end up as being 29 characters long, including letters and dots, in order to fit neatly into our box. If they are not 29 characters long then we need to do something about it, and just as the structure of this sentence told us that *if something then do something*, this is the form of this most important Basic decision-making set of commands:

IF something THEN do something

Adding two lines to our program should serve to illustrate this. The second one will seem complicated at first: study it slowly, and it should begin to make sense:

```
380 FOR I=1 TO 10
390 A=LEN(NAME$(I)):IF A<>29
THEN FOR J=A+1 TO 29:NAME$(I)=
NAME$(1)+".":NEXT J
```

Take it one step at a time. Line 380 is clear: we are setting up a loop that will be performed ten times. At the start of line 390 we find the length of the i'th element in the NAME$ array. If this length does not equal (that is the <> symbols, somewhat to the left of the RETURN key and accessed by using the SHIFT key) 29 THEN we set up another loop. Note that the variable in our second loop is J, rather than I. We could not have two loops using the same variable, otherwise the computer would think I,I? and cause chaos amongst the two loops.

This second loop then increases the length of the I'th element in the NAME$ array, padding it out with dots until it reaches the desired length of 29 characters. Why should we start our second J loop with A+1? Try it with A, and test for the length of the string afterwards by using the LEN command.

The next program line is another complicated one, and introduces our final command for this month. This is STR$, which turns a number into a string:

```
400 X=5:Y=8+I:GOSUB 430:PRINT
NAME$(I);"      ";REV$;"(";STR$(I);
")";ROF$
```

Again, we will go through this one step at a time. Declare the variable X to be equal to 5. The variable Y is then declared, dependent on the value of I. As I increases it will be seen that Y increases also. Then, we go to the subroutine at line 430:

```
430 PRINT LEFT$(CD$,Y)*LEFT$
(CR$,X);:RETURN
```

Unlike some Basics, Commodore Basic does not have a LOCATE command. That is, given an X and a Y co-ordinate we can locate — position — the cursor at the desired point. However, we have previously (line 60) defined two variables to consist of a string of cursor downs CD$ and cursor rights CR$, both CHR$ values coming from the manual. We can now use the LEFT$ command in conjunction with these two variables to place the cursor where we wish — note those semi-colons!

Back to line 400. Having positioned the cursor at the correct point within the box, we can now print our NAME$(I), suitably padded with dots, a space, turn reverse print mode on, print a left bracket, print the string equivalent of I (this is for screen clarity: try it without the STR$ command, just printing I instead, to see what happens), print a space and a right bracket, before finally turning reverse print mode off. All of this, as you can see, is printed out separated by semi-colons so that it all appears on the same line on the screen.

```
410 NEXT i
```

Type all these new lines in, save them to disk with the usual save **"menu",8** command, and then LIST the program. If any of the points raised are not clear to you, go through the article again, slowly, and try and take each command at a time. One of the greatest ways of getting to grips with BASIC is by experimentation, so alter some of the variables to see what happens.

Astute readers will have realised that we have not quite finished our screen display so that it is like figure one. Add a temporary line **80 END**, which we will erase next month (keep it in until then), and RUN the program. No line 230 is there? Try and fill in lines 230, 240, 250, 260 and 270 so that your screen display matches that shown in figure one. No prizes, but we will give the answer next month. You will need to use a variable to clear the screen; you will need to turn reverse mode on and off; and you will need the keywords PRINT and TAB. Unitl next month then, get to that keyboard!

P.G.

NOW
EVEN
A
an 8K F
perfor
MOR
✓ TURB
& "Warp
any gar
screen
with
✓ SUPE
SCRE
DIS
FAC
COM
✓ CEN
CO
Action
Replay
S
BLO
SPR
MESS
or
DA
produ
ma

s then
e of I.
hat Y
o the

EFT$

dore
com-
a Y
sition
point.
e 60)
of a
ursor
ming
e the
with
ursor
semi-

oned
within
NA-
ots, a
e on,
string
larity:
l, just
hap-
right
verse
u can
semi-
n the

save
save
LIST
aised
h the
l take
of the
s with
alter
what

alised
d our
figure
END,
eep it
gram.
lines
t your
own in
ll give
need
creen;
de on
key-
next
d!

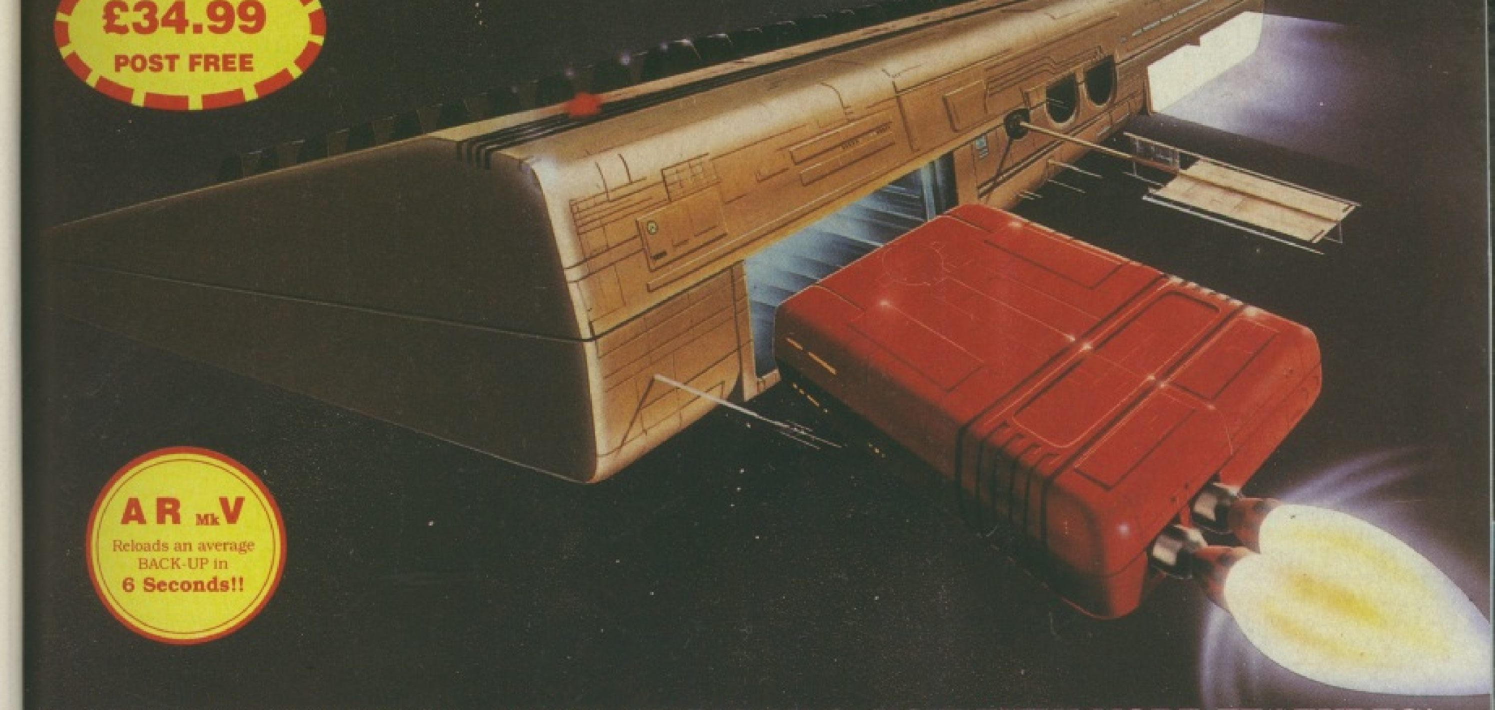
P.G.

THE ULTIMATE BACKUP CARTRIDGE GOES ONE BETTER...

NOW ACTION REPLAY Mk V PROFESSIONAL

FOR CBM64/128 HAS ARRIVED

ONLY
£34.99
POST FREE



A R MkV
Reloads an average BACK-UP in
6 Seconds!!

EVEN MORE POWERFUL, MORE FRIENDLY & NOW EVEN MORE FEATURES!

ALL FEATURES AVAILABLE TO TAPE OR DISK USERS.

ACTION REPLAY Mk V differs from all other cartridges because it combines an 8K RAM with a FULL 32K operating system ROM. That means that ALL features are INSTANTLY AVAILABLE AT ALL TIMES.

WARNING!! Other systems use outdated technology which severly limits performance. Action Replay's state of the art hardware gives you MORE POWER, MORE SPEED, MORE FACILITIES than any other cartridge. There really is no comparison. Here are just some of the features...

✓ **TURBO RELOAD** Action Replay Mk V has 2 unique Turbo Loaders - "Ramloader" & "Warp 25". Both work at up to 25 times normal speed! ✓ **PRINTER DUMP** freeze any game & print out the screen. ✓ **PICTURE SAVE** save any HiRes multi colour screen to disk at the push of a button. ✓ **SPRITE CONTROL** full range of controls with 64K operation. ✓ **POKEFINDER GENERAL** an automatic infinite lives generator! ✓ **SUPER COMPACTOR** ultra efficient program compaction techniques. ✓ **TEXT SCREEN EDITOR** modify the text screen on a frozen program. ✓ **SUPERFAST DISK OPERATION** load 200 blocks in just SIX SECONDS. ✓ **MORE TAPE FACILITIES** you don't need a disk drive to use Action Replay. ✓ **TOOLKIT COMMANDS** full range all at the press of a button. ✓ **FULLY INTEGRATED OPERATION** with onboard custom LSI LOGIC PROCESSING CHIP. ✓ **CENTRONICS INTERFACE** for parallel printers. ✓ **PROFESSIONAL MACHINE CODE MONITOR** Full 64K monitor available at all times with full range of commands.

TOTAL BACKUP POWER

The most powerfull backup system ever devised. Unstoppable freezer system. Freeze at any point. Just press the magic button to backup your programs.

☐ TAPE TO TAPE ☐ TAPE TO DISK ☐
☐ DISK TO DISK ☐ DISK TO TAPE ☐

VERY fast & efficient program compaction. Single part save at TURBO speed to disk or tape. Backups turboload INDEPENDENTLY of cartridge. No "programing" or user knowledge required.

THE PROCESS IS AUTOMATIC - JUST GIVE THE BACKUP A NAME.

WHAT THE REVIEWERS SAID

"I'm stunned, amazed and totally impressed. This is easily the best value for money cartridge. *The Cartridge King!*"

Commodore Disk User

UPGRADE INFORMATION

Mk IV Professional to Mk V Professional - just send £9.99 & we will send you a new Mk V Operating System Chip for you to just plug in! Mk IV (Standard) to Mk V Professional - send your old cartridge plus £15.99 & we will upgrade it (allow 14 days).

PERFORMANCE PROMISE

Action Replay has an unmatched range of onboard features. When you buy Action Replay, if you don't find our claims to be true, then return it within 14 days for a full refund.

GRAPHICS SUPPORT UTILITIES DISK

SLIDE SHOW. View your favourite screens in a slide show type display.

BLOW UP. A unique utility to allow you to take any part of of your picture & 'blow it up 'to full screen size.

SPRITE EDITOR. A complete sprite editor helps you to create or edit sprites.

MESSAGE MAKER. Takes your favourite screen created with a graphics package or captured with Action Replay & turns it into a scrolling screen message complete with music.

ONLY £12.99

NOTICE 1988 COPYRIGHT ACT

DATEL ELECTRONICS Ltd. neither authorizes or condones the use of it's products to reproduce copyright material. It is illegal to make copies of such material without the expressed consent of the copyright owners or thier licencees.

ALL ORDERS NORMALLY DESPATCHED WITHIN 48 HRS

HOW TO ORDER ...

BY PHONE	BY POST	FAX
0782 744707 24hr Credit Card Line	Send cheques/POs made payable to "Datel Electronics"	0782 744292 UK ORDERS POST FREE -EUROPE ADD £1 OVERSEAS ADD £3

PRICES AND SPECIFICATIONS CORRECT AT TIME OF PRESS AND SUBJECT TO CHANGE WITHOUT NOTICE

CALLERS WELCOME - Please reserve goods by telephone prior to visit.

DATEL ELECTRONICS

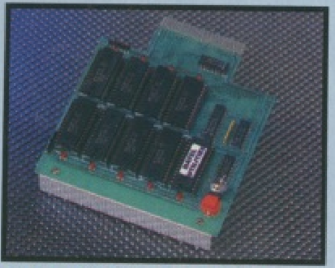
DATEL ELECTRONICS LTD., FENTON INDUSTRIAL ESTATE
GOVAN ROAD, FENTON, STOKE-ON-TRENT, ENGLAND.

SALES ONLY
0782 744707

TECHNICAL ONLY
0782 744324

ARV 2

DATEL ELECTRONICS



256K SUPEROM EXPANDER

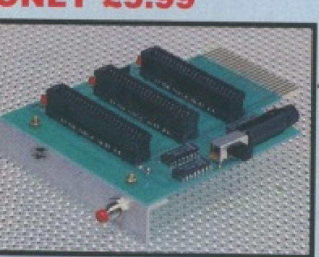
- ☐ Select instantly from 8 sockets which accept up to 32K EPROM each.
- ☐ Program your own EPROMs using our EPROM programer.
- ☐ No need to have lots of cartridges - just make a selection from the Superom menu.
- ☐ Fully menu driven on power up.
- ☐ Select any slot under software controls.
- ☐ Unique EPROM generator feature will take your own programs - basic or m/c & turn them into autostart EPROMs. (EPROM burner required).
- ☐ Accepts 2764/27128/27256 EPROMs.
- ☐ On board unstoppable reset.
- ☐ On board operating systems - no programs to load.

ONLY £29.99

RESET CARTRIDGE

- ☐ Unstoppable reset button. NOTE:- user port cheaper type reset buttons offered by others are not unstoppable.
- ☐ Resets even so called "unstoppable" programs.
- ☐ Add pokes from magazines etc.
- ☐ Fits in cartridge port.
- ☐ Simply plug in.

ONLY £5.99



3 SLOT MOTHERBOARD

SAVE WEAR & TEAR ON YOUR EXPANSION PORT

- ☐ Accepts 3 cartridges.
- ☐ Switch in/out any slot.
- ☐ Onboard safety fuse.
- ☐ Fully buffered.
- ☐ High grade PCB.
- ☐ Reset button.

ONLY £16.99

MIDI 64

FULL MIDI INTERFACE FOR THE 64/128 AT A REALISTIC PRICE.

- ☐ MIDI in/MIDI thru/2 x MIDI out.
- ☐ Compatible with most leading software packages.

ONLY £29.99

DIGITAL SOUND SAMPLER

- ☐ The new sampler allows you to record any sound digitally into memory & then replay it with astounding effects.
- ☐ Playback forwards/backwards with echo/reverb/ring modulation.
- ☐ Now with full sound editing module to produce outstanding effects.
- ☐ Full 8 bit D to A & ADC conversion.
- ☐ MIDI compatible with suitable interface. (i.e. Datel unit for £29.99, see ad.).
- ☐ Live effects menu includes real time display of waveforms.
- ☐ Line in/mic in/line out/feedback controls.
- ☐ Powerfull sequencer with editing features.
- ☐ Load/save sample.
- ☐ Up to 8 samples in memory at one time.
- ☐ Tape or disk (please state).
- ☐ Complete software/hardware package.

ONLY £49.99

COM-DRUM

DIGITAL DRUM SYSTEM

- ☐ Now you can turn your digital sound sampler into a digital drum system.
- ☐ 8 digital drum sounds in memory at one time.
- ☐ Complete with 3 drum kits.
- ☐ Real drum sounds - not synthesised.
- ☐ Create superb drum rhythms with real & step time.
- ☐ Full editing. Menu driven.
- ☐ Output to hi-fi or through TV speaker.
- ☐ Load/save facilities.

ONLY £9.99

STATE TAPE OR DISK

COM-DRUM EDITOR

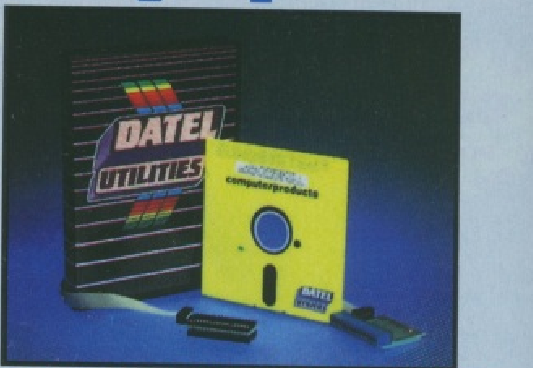
- ☐ 24 drum sounds supplied on disk to enable you to construct your own drum kit.
- ☐ Re-arrange sounds supplied with a Com-Drum to make new kits.
- ☐ Load/save facilities.

ONLY £4.99 DISK ONLY

DATA RECORDER

- ☐ Quality Commodore compatible data recorder.
- ☐ Pause control, counter, etc.
- ☐ Suitable for 64/128.
- ☐ Send now for quick delivery.

ONLY £24.99



DEEP SCAN BURST NIBBLER™

- ☐ The most powerfull disk nibbler available anywhere, at any price! Burst Nibbler is actually a two part system - a software package & a parallel cable to connect the 1541/1570/1571 to 64/128 (state type).
- ☐ What gives Burst Nibbler it's power? Conventional nibblers have to decode the data from the disk before it can transfer it using the serial bus - when non standard data is encountered they are beat. Burst Nibbler transfers data as raw GCR code via the parallel cable without the need to decode it so you get a perfect copy of the original.
- ☐ ● Will nibble up to 41 tracks ● Copy a whole disk in under 2 minutes ● Full instructions

ONLY £24.99 COMPLETE

● Regular updates - we always ship the latest ● Fitted in minutes - no soldering usually required ● Full or 1/2 tracks ● No need to buy parallel cable if you have Disk Demon/Dolphin etc. ● Cable has throughbus extension for other add ons.

- ☐ Wether to choose FastHack'em or Burst Nibbler? Fast Hack'em is unbeatable value as an "all rounder" - with nibblers, 1 or 2 drive copy, format, file copy, 1571 copy etc. etc., so if you have a more general requirement perhaps Fast Hack'em is for you. Burst Nibbler is a pure nibbler second to none, for the reasons stated. So if it's just making backups you are interested in, there is no other product to beat it!

SOFTWARE ONLY £12.99

CABLE ONLY £14.99

NOTICE 1988 COPYRIGHT ACT

DATEL ELECTRONICS Ltd. neither authorizes or condones the use of it's products to reproduce copyright material. It is illegal to make copies of such material without the expressed consent of the copyright owners or thier licencees.

ROBOTEK 64

MODEL & ROBOT CONTROL MADE EASY.

- ☐ 4 output channels - each with onboard relay.
- ☐ 4 input channels - each fully buffered TTL level sensing.
- ☐ Analogue input with full 8 bit conversion.
- ☐ Voice input for voice control.
- ☐ Software features:- test mode/analogue measurement/voice activate/digital readout etc.

ONLY £39.99

INCLUDING HARDWARE/SOFTWARE/MIC. ETC,(STATE TAPE OR DISK).

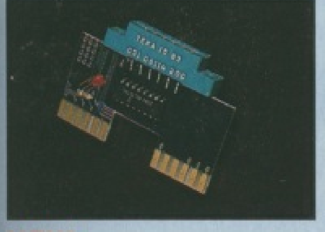
TOOLKIT IV

THE ULTIMATE DISK TOOLKIT FOR THE 1540/1541.

- ☐ A disk toolkit is an absolute must for the serious disk hacker. Toolkit IV has more features than most for less.
- ☐ DISC DOCTOR V2 - Read & write any track & sector including extra & renumbered tracks. Repair damaged sectors. Look underneath read errors.
- ☐ HEADER/GAP EDITOR - Decodes & displays ALL header information including off bytes & header gap. Rewrite the entire header & header gap. Renumber sectors. Also edit any sector tail gap.
- ☐ DISK LOOK - Sort directory. Recover lost files. Display file start /end addresses. Disassemble any file program directly from the disk to SCREEN or PRINTER including undocumented opcodes. Edit Bam.
- ☐ FAST FILE COPY - Selective file copy. Works at up to 6 times normal speed.
- ☐ FAST DISK COPY - Copy an entire disk in 2 minutes or less using single 1541.
- ☐ FILE COMPACTOR - Can compact machine programs by up to 50%. Save disk space. Compacted programs run as normal.
- ☐ FORMATTER - 10 second format an entire disk or format any individual track or half track 0 to 41. Re-define any of 30 parameters to create or recreate unique disk formats.
- ☐ ERROR EDIT - Quickly find & recreate all read errors including extras & renumbered tracks or sectors & half tracks from 0 to 41. Even recreates data under errors & allows you to redefine any necessary parameters.

ONLY £9.99

DATEL ELECTRONICS



NEW CLONEMASTER

- ☐ The most effective tape to tape back-up board available.
- ☐ Makes perfect backups of your tapes easily & effectively!!
- ☐ No user knowledge needed at all.
- ☐ On board TTL logic circuitry actually shapes the program & sends a perfect signal to the record cassette - producing a copy better than the original in many cases.
- ☐ L.E.D. indicator shows when data is being transferred to avoid exessive tape winding.
- ☐ Works with almost any program including multi-loaders, turbos & even very unusual type turbos.
- ☐ Requires access to two CBM compatible data recorders.
- ☐ Simply press 'Play' on one recorder & press 'Record' on the other - that's it!
- ☐ You can even make a backup while you are loading the program.
- ☐ This is a total hardware solution - no programs to load - the results are stunning!

ONLY £9.99

TURBO ROM II

TURBO ROM II IS A REPLACEMENT FOR THE ACTUAL KERNAL INSIDE YOUR 64. IT PROVIDES SUPERFAST LOAD/SAVE ROUTINES.

- ☐ Loads most programs at 5-6 times normal speed.
- ☐ Saves at 5-6 times normal speed as well.
- ☐ Improved DOS support including 10 sec. format.
- ☐ Programed function keys:- load, directory, old, etc.
- ☐ Return to normal kernal at a flick of a switch.
- ☐ FCOPY-250 block file copier.
- ☐ FLOAD-special I/O loader.
- ☐ Plus lots more.
- ☐ Fitted in minutes - no soldering usuallly required. (On some 64's the old ROM may have to be desoldered).

ONLY £14.99

SMART CART

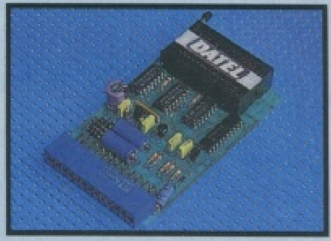
- ☐ 32K pseudo ROM.
- ☐ Lithium battery lasts up to 5 years.
- ☐ Simply load the program you require - then flick the switch. The cartridge can then be removed just like a ROM cartridge.
- ☐ Make your own cartridges including autostart types - without EPROM burner. 32K version = 4 x 8K pages.
- ☐ Some knowledge of M/C is helpful - but full instructions included.
- ☐ I/O 2 slot open for special programing techniques.

ONLY £29.99

RAM DISK

- ☐ Turn your Smart Cart into a 32K Ram/disk.
- ☐ 32K of instant storage area for files/programs.
- ☐ Disk type commands:- load, save, directory, scratch.
- ☐ Program data retained when computer is switched off!
- ☐ Full command set with instructions.

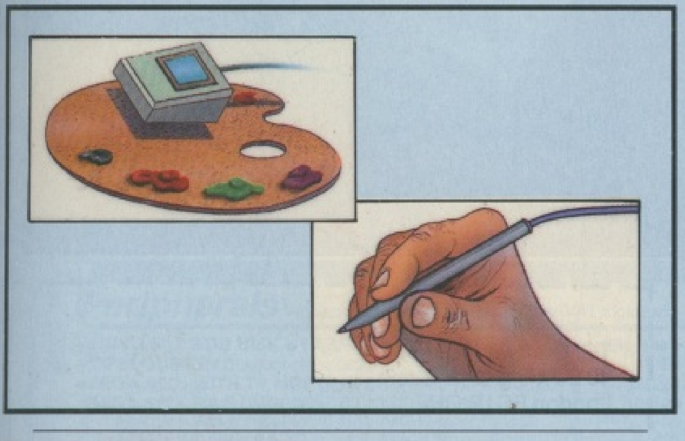
ONLY £9.99



EPROMMER 64™

- ☐ A top quality, easy-to-use EPROM programer for the 64/128.
- ☐ Fully menu driven software/ hardware package makes programing/reading/verifying/ copying EPROMs simplicity itself.
- ☐ Will program 2716, 2764, 27128 & 27256 chips, 12.5, 21 or 25 volts.
- ☐ Fits into user port for maximum compatibility with cartridges/ Superom Board etc.
- ☐ Full feature system - all functions covered like device check/verify.
- ☐ We believe Epprommer 64 is the most comprehensive, most friendly & best value for money programer available for the 64/128.
- ☐ Ideal companion for Superom Board, Cartridge Development System, our kernal expanders or indeed any EPROM base project.
- ☐ Comes complete with instructions - plus the cartridge handbook.

ONLY £39.99
COMPLETE



BLAZING PADDLES

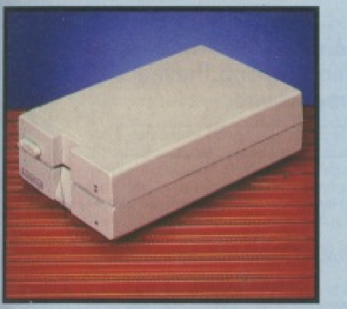
A COMPLETE LIGHTPEN/GRAPHICS ILLUSTRATOR PACKAGE.

- ☐ A fully Icon driven graphics package of a calibre which should cost much, much more.
- ☐ Complete with a fibre optical lightpen system for pin point accuracy.
- ☐ Pictures can be saved from 'Action Replay' & edited with Blazing Paddles.
- ☐ Blazing Paddles will also work with many other input devices including:- Joysticks, Mice, Graphics Tablets, Trackball, etc.
- ☐ Multi feature software including:- ● Range of brushes ● Airbrush ● Rectangle ● Circle ● Rubberbanding ● Lines ● Freehand ● Zoom mode ● Printer dump ● Load/save ● Advanced colour mixing - over 200 hues! ● Cut & paste allows shapes/windows/pictures to be saved to/from tape/disk.

ONLY £24.99
COMPLETE BLAZING PADDLES & LIGHTPEN

BLAZING PADDLES ONLY
£12.99

BLUE CHIP DRIVE



- ☐ External power supply for cool operation.
- ☐ Even works in 1571 double sided mode (128 mode).
- ☐ Fully C64/128 compatible.
- ☐ This drive is now probably the most compatible drive available for the Commodore. More so than even Commodores own '1541C'.
- ☐ Supplied complete with all cables - no more to buy.
- ☐ At last, a top quality drive at a sensible price.

ONLY £129.99
ADD £5.00 FOR COURIER DELIVERY

ULTRA CRUNCHER

- ☐ The ultimate cartridge based program compactor.
- ☐ Compacts by up to 30%!
- ☐ 3 compacting programs on one cartridge.
- ☐ Fast loading/saving routines.
- ☐ Full DOS support including fast format.

ONLY £12.99
on cartridge

Available as chip only for 256K Superom Board fcr
ONLY £7.99

FAST HACK'EM™

- ☐ Multi Module Disk Nibbler - all on the one disk.
- ☐ Single 1541 Nibbler - Copy an entire disk in just 2 minutes.
- ☐ Super fast File Copy - typically copies an average file in under 9 seconds.
- ☐ No other product is such a good "All Rounder" at this incredibly low price...

ONLY £9.99

ALL ORDERS NORMALLY DESPATCHED WITHIN 48 HRS

HOW TO ORDER ...

BY PHONE	BY POST	FAX
0782 744707 24hr Credit Card Line	Send cheques/POs made payable to "Datel Electronics"	0782 744292 UK ORDERS POST FREE EUROPE ADD £1 OVERSEAS ADD £3

PRICES AND SPECIFICATIONS CORRECT AT TIME OF PRESS AND SUBJECT TO CHANGE WITHOUT NOTICE

CALLERS WELCOME - Please reserve goods by telephone prior to visit.

DATEL ELECTRONICS

DATEL ELECTRONICS LTD., FENTON INDUSTRIAL ESTATE
GOVAN ROAD, FENTON, STOKE-ON-TRENT, ENGLAND.

SALES ONLY	TECHNICAL ONLY
0782 744707	0782 744324

"SPEAK TO HEARSAY 1000"

C64/128

AND YOUR COMPUTER WILL OBEY!

- Hearsay 1000 can understand words that you speak and follow your instructions without fail.
- The amazing Hearsay 1000 plugs into the expansion port of the C64/128 and through a line directly to the monitor, has access to the monitors loudspeaker.
- It comes with a disk of demos and utilities an can understand your voice input. It is simple to use and, according to CCI's demanding reviewer the system is amazingly accurate. It will even recognize other people's voices than your own if you want it to.
- You could put Hearsay 1000 to all sorts of uses. But for the first time you will have a computer that will operate by voice recognition.
- Hearsay 1000 has a RRP of £69.95 but through this offer you can save £5! It's only £64.95.

TO: Croftward Direct
40 Bowling Grren Lane
London EC1R ONE

Please send me .... Hearsay 1000(s) at £64.95 each, including VAT and postage and packing. I have enclosed a cheque, or debit my Access account:

☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

Name..

Address..

....

....

Post Code...

Signature..

Please allow 28 days for delivery

C9072

SPEAK TO HEARSAY 1000 AND YOUR COMPUTER WILL OBEY!

Special Reserve Official Secrets Special Reserve Official Secrets Special Reserve Official Secrets Special Reserve Official Secrets Special Reserve

JOIN THE CLUB!

If you're looking for the best prices, best games, best offers and best service, then join ***Special Reserve***. Or join ***Official Secrets*** if you're looking for more...

Special Reserve

Best games at best prices

All the best games, carefully selected and available to members only at truly extraordinary prices. We're miles cheaper than elsewhere, so cheap that we can't advertise our individual prices. Below are a selection of offers for two games at about the same price you would normally pay for one. You can buy a pair of games at the same time as joining - or join now and select individually from our catalogue of over 700 products. There is no obligation to buy anything.

Games Pick a pair of games

Below is a small selection from our catalogue. The prices shown are our combined price for both games including UK postage. (RRP is Recommended Retail Price)

AMIGA		RRP	SRP
AMERICAN ICE HOCKEY	STRIKE FORCE HARRIER	49.98	20.98
BLOOD MONEY	PURPLE SATURN DAY	49.90	24.98
DRAGON NINJA	ELIMINATOR	44.94	22.46
DRAGON'S LAIR (1 MEG)	WHO FRAMED ROGER RABBIT (1 MEG)	69.94	35.96
DUNGEON MASTER (1 MEG)	WHO FRAMED ROGER RABBIT (1 MEG)	49.98	24.48
ELITE	NIGEL MANSELL'S GRAND PRIX	49.94	18.96
FORGOTTEN WORLDS	CAPTAIN BLOOD	44.94	21.98
GRAND MONSTER SLAM	PURPLE SATURN DAY	44.94	20.98
H.A.T.E	HELLFIRE ATTACK	39.98	18.48
HYBRIS ARKANOID	XENON	44.98	22.98
KRISTAL	CAPTAIN BLOOD	54.94	24.98
KULT, TEMPLE OF FLYING SAUCERS	VIXEN	44.94	18.48
LORDS OF THE RISING SUN	DEFENDER OF THE CROWN	59.94	24.94
MICROPROSE SOCCER	NIGEL MANSELL'S GRAND PRIX	49.94	21.48
MILLENNIUM 2.2	TEENAGE QUEEN	44.94	24.98
POPULOUS	BALANCE OF POWER	54.94	22.48
ROBOCOP	SKYCHASE	44.94	22.46
ROCKET RANGER	INCREDIBLE SHRINKING SPHERE	54.98	25.98
SHOOT 'EM-UP CONSTRUCTION KIT	ELIMINATOR	49.98	24.98
SWORD OF SODAN	THREE STOOGES	54.98	22.48
TEENAGE QUEEN	HYBRIS	44.94	19.98
ULTIMA V, WARRIORS OF DESTINY	BALANCE OF POWER	59.90	24.46
WATERLOO	DEFENDER OF THE CROWN	54.94	23.94
ZORK ZERO	SHADOWGATE	54.98	25.98

COMMODORE 64		DISK	TAPE
AMERICAN ICE HOCKEY	VIXEN	13.48	9.48
DENARIS	CAPTAIN BLOOD	16.98	11.98
H.A.T.E	KNIGHT ORC	16.94	13.94
HEROES OF THE LANCE	THREE STOOGES	17.98	
HILLSFAR	JEWELS OF DARKNESS	19.94	
PURPLE SATURN DAY	TETRIS	12.48	9.48
ROBOCOP	HELLFIRE ATTACK	13.46	9.46
ROCKET RANGER	THREE STOOGES	15.98	
SHOOT 'EM-UP CONSTRUCTION KIT	STAR WARS	15.98	12.48
SILKWORM	SUPREME CHALLENGE (INCL ELITE)		12.48
VIGILANTE	TETRIS	13.98	10.48
WAR IN MIDDLE EARTH	CAPTAIN BLOOD	18.98	11.98
WEC LE MANS	HELLFIRE ATTACK	13.46	9.46
XENON	CAPTAIN BLOOD	13.48	

Peripherals Accessories at acceptable prices (VAT included)

SONY 3.5" DS/DD DISK + LABEL (MINIMUM 3 DISKS)	**99p each**
POPULOUS LEAD (NULL MODEM CABLE)	**8.99**
AMIGA A500 WITH TV MODULATOR (PLEASE PAY BY CHEQUE)	**349.99**
AMIGA 512K RAM UPGRADE TO 1 MEGABYTE (WITH CLOCK)	**129.99**

KIND WORDS 2 (AMIGA W/PROCESSOR)	31.49	DELUXE PAINT 3 (AMIGA)	51.49
PRINTER LEAD FOR AMIGA or ATARI ST	9.99	MOUSE MAT	4.99
80 COLUMN PRINTER STAND	13.99	MONITOR STAND FITS OVER ST or AMIGA	17.99
KONIX NAVIGATOR AUTOFIRE JOYSTICK	11.99	COMPETITION PRO CLEAR JOYSTICK	13.99

Club Privileges All club members benefit from:

- Special offers: at prices you might not believe!
- Bi-monthly Buyer's Guide each with details of 40 games, building to a valued reference.
- Membership card with privilege number, and folder for the Buyer's Guides.
- 24-hour despatch of stock items. Over 500 lines in stock.
- Each game sent individually by 1st class post. Most will fit through your letter-box.
- 7-day sales hotline, manned 9am to 8pm weekdays, 10am to 5.30pm weekends.
- Written notification of unexpected delays.
- New titles may be ordered in advance and will be despatched upon publication.
- Instant refunds available on request for delayed titles.
- No commitment, no obligation to buy anything and no "minimum purchase".

Official Secrets

Confidential 32-page A4 bi-monthly glossy magazine

Confidential is written for people who take their fun seriously. If you are into Adventure, Strategy, FRPs, MUGs, PBMs, D&Ds, or if you would simply like to see more from behind the scenes then Confidential is essential reading. Regular features include Personnel File, Dead Letters, The Man in Black, Feature Articles, Brain Teasers, Diary, News, Competitions, and The Boss Upstairs. Club participation is welcomed.

Gnome Ranger Level 9's award-winning 3-part adventure

Starring Ingrid Bottomlow. "Go out and buy *Gnome Ranger* pronto" said Atari ST User. If you already did please tick the box for a Surprise Alternative.

Help-Line Manned each week-day

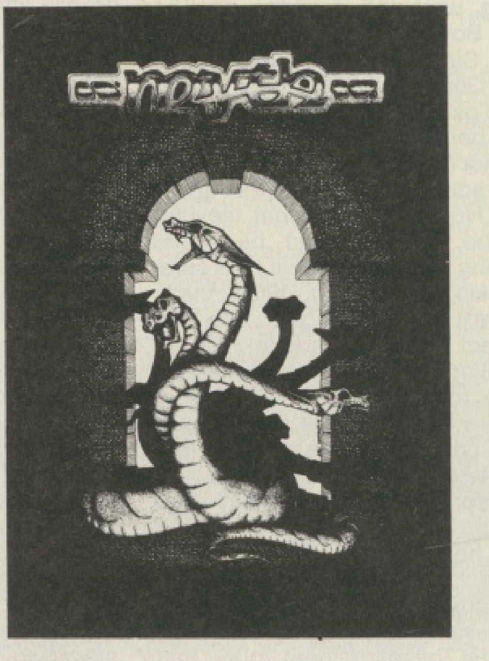
Advice and hints to help you solve any game bought from us.

Special Reserve Included in the membership fee

All the features and benefits of Special Reserve membership .

Myth A mini-adventure by Magnetic Scrolls

Written exclusively for members of Official Secrets and, amazingly enough, included in the price of membership. Set in Ancient Greece, you play the part of a young god striving to prove himself worthy of immortality. You'll meet the Ferryman, have a chance to cheat Death, and do battle against the nine-headed Hydra guarding the gates to the Underworld. *Myth* includes the state-of-the-art Magnetic Scrolls parser and those incredible graphics. For most computers - disk only. Only to members of Official Secrets. Members stipulating Tape will receive **Captain Blood** in place of Myth.



See elsewhere in this issue for a review of Myth

To order please write, or complete the coupon, or telephone us on **0279 600204.** Please note that there is a surcharge of 50p per game for orders placed by telephone.

Order Form Non-members please add the membership fee

Name____________________
Address____________________
____
__________ Post Code__________
Computer __________ *5.25"/*3.5"/*3.0"/*TAPE

Payable to: **Special Reserve** or **Official Secrets**
P.O. Box 847, Harlow, CM21 9PH

Special Reserve and Official Secrets are trading names of Inter-Mediates Ltd.
Registered Office: 2 South Block, The Maltings, Sawbridgeworth, Herts CM21 9PG.
Registered in England Number 2054713. VAT reg. no. 424 8532 51

Special Reserve membership £4.00 UK, £5.00 EEC
or
Official Secrets membership £19.95 UK, £24.95 EEC £
with Gnome Ranger ☐ or with Surprise Alternative ☐ CCI

Game ____________________ } £
Game ____________________

*CHEQUE/*POSTAL ORDER/*ACCESS/*VISA/*AMEX
(Including Connect, Mastercard and,Eurocard) **TOTAL** £

Credit card expiry date __________
☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

* Delete where applicable

Overseas orders must be paid by credit card. please add 70p per game for EEC Post

RPGs The Playing Of Them!

Peter Gerrard concludes his series on role playing with a little help from a famous friend and a recommendation for something called 'Dungeon Surf Warrier Strikes Back' …

Aloha! That's what comes of spending a sunny Sunday morning watching a video of The Beach Boys playing a concert in Waikiki. Sun, surf, sand, Little Deuce Coupe, Good Vibrations, Fun Fun Fun and two girls for every boy … what am I doing here sitting in front of a word processor?! Come to think of it, why doesn't someone write an RPG about surfin'? Not quite sure what the plot might be, but it would be pretty interesting trying to play it, I'm sure. And talking of playing RPGs, that's what we'll be covering in this last instalment of our excursion into the genre. Since two heads are meant to be better than one, I've enlisted th help of Sandra Sharkey. That should be a familiar name to some of your, ex-editor of *Adventure Probe* and all that, so between us let's see if we can cover everything there is to know about getting home with that brand new program, loading it up, and defeating the bad guys. There's always a bad guy in there somewhere, even The Baddest Guy of all if you play that wonderful game Populous, so let's get started.

Let's assume that you've bought a fictitious RPG called Dungeon Surf Warrior Strikes Back (or whatever), and it comes in a nice box. Inside the box we have a disk (or disks, or tape), assorted gumph relating to the game, and the manual. When I first tried to read the manual that comes with Populous I quickly gave up and just dived headfirst into the game. This is not bad think, but it really does help if you read the manual first, even if you just skim through it in order to gather the basics of the game. If there's a novella attached, read it as well, as it might contain some vital hints and clues. If it's like most such novellas then it will probably be a load of tripe, reluctant to part with cash for no apparent reason. Read, read, read, is the first point to be considered. At least you'll find the loading instructions, and then we're ready to go.

Let's see what Sandra has to say on the subject of starting to play an RPG:

Normally you get the chance to create you own character, or party of characters, before you can even begin to play the game. Study the manual that accompanies the game very thoroughly as it will provide lots of information about the qualities that different combinations of statistics will give your character (See! — P.G.). In some games there are different species of character to consider as well, and different people will be better in certain occupations than others would be. For example, elves are prone to magic, so choosing an elf as a warrior would not be a very smart decision to make.

Statistics also vary from game to game, but some of the most common are skill, strength, stamina, charm, intelligence and wisdom. It is also important that your character begins with a reasonable amount of hit points, as these reduce with each direct hit that your opposition manages to land.

No matter what the storyline, you can bet your bottom dollar that your won't be able to complete a role playing game in an evening or two as you have to build up your characters, and this takes time. If you don't have the patience to spend a few days building up your characters then don't tackle an RPG.

All this is certainly very true of most of the role playing games that I've encountered, going back as far as our old friend the Temple of Aphsai, and all the offshoots that were spawned from it. Whether you have one character or a group of characters, though, certain things remain the same.

Progress throughout these games usually depends on experience and gold, the more you have of both, the better. Skills are very important, and you must endeavour to build up the attributes quickly. Experience is gained by fighting, and defeating your opponents, and sometimes you can find useful or magical items after a skirmish. These can vary from pieces of armour to better weapons, potions or treasure.

After playing for a while, you may find that you become very attached to your party. I get very upset when one of my favourite characters meets with a sticky end, but most RPGs allow some form of resurrection for characters who have died, so that all the experience and treasure that you have worked so hard for is not lost for good.

It's true, you know, I'm the same. Somehow, that little collection of pixels moving about on the computer screen take on a life of their own, and you find yourself willing your favourite characters to win a battle, however unfair the odds might be. This emphasises the importance of both experience and the mythical 'hit points', something that confused me a little when I first started playing RPGs. Basically, the more hit points that a character has the better chance that character has of winning a fight. A character with twenty hit points should defeat a character with only fifteen hit points, for instance, although two or more characters can gang up together at times and form what might be termed a dangerous liaison.

Another term that confused me for a while was the mysterious word 'stats'. My character has twenty four stats, people would say, leaving me somewhat baffled. But again, the explanation is simple. If points for each statistic such as strength, stamina, etc., are awarded on a one to six basis, then you could be said to have five stats for strength, four for stamina, and so on, giving an ultimate total of twenty four stats. Like all aspects of computers, the RPG son built up its own unique brand of terminology. Let's carry on.

Another facility that software companies are beginning to offer is one that allows you to save your characters from one game and load them into another. This means that you can get straight into playing the next game in a series, instead of having to build up your characters from scratch. Much as I enjoy building up the skills of members of my party, it is useful to be given the option of keeping the same group of characters, who can soon become "old friends", and are usually the product of many hours of play.

This feature is more useful than it might seem at first glance. If we look at the game Alternate Reality, for example, the basic scenario of the first game is that you just wander about the place gaining experience, fighting off baddies, getting a job, finding a safe place to sleep for the night, and all those other things that go to make up an Alternate Reality lifestyle. There are a number of add-ons planned for this particular game, centring around the original landscape but branching out from it, and to have to play the first game all over again every time you wanted to branch out would be tedious in the extreme. Fortunately one can safely assume that your character, together with all that hard earned experience, can be plonked down right at the start of any of the branches as and when they become available and start straight away on the quest in hand. Just put a in a disk and away you go. Hopefully, then, when The Dungeons (supposed to be the first), The Palace and The Wilderness appear you'll be able to go to the appropriate entrance in the city, load in your character, and take it from there.

And talking of exploring landscapes:

Mapping is sometimes, but not always, necessary, and can usually be done in much the same way as for "traditional" adventures. Most of the RPGs that I have played have had some way of teleporting from place to place once the characters have reached a certain level of skill, which is very useful as it can become very tedious trudging about what is usually a vast landscape.

Again, we can examine this in terms of those traditional adventures. In the early days of writing adventures I was a guilty as anyone else of having vast areas where problem (a) was miles away from problem (b), and the player had to trvel all the way to location (c) to get something to help solve the puzzle. This is not good game writing, although it was prevalent at the time, and adventures and RPGs now seem to have got round this (for the most part, anyway) by having these teleport systems or the adventure equivalent the GOTO location command.

Mapping can also have other uses, as anyone who has played Alternate Reality might tell you. Sorry to keep harping on about this game, by the way, but I do like it! In Alternate Reality there is a collection of locations known as Price Commons, somewhere near a Royal Walkway. If you map this very carefully, and then turn your map sideways, be prepared for a good laugh.

But there are other aspects of RPGs that we haven't even considered yet …

Magic is very often used, and must be learned. Sometimes this seems a daunting task, but it is surprising how quickly you can learn all the spells and the best way to cast them to full effect.

All very well, but learning some of these spells is a bit tricky. In Alternate Reality you're pretty much up against it until you reach the umpteenth level (well, all right, level seven or eight) when you can join a Guild and start on the long process of learning a spell. Like many RPG aspects this does indeed take a long time! Thirteen game days, in my case, and I would have had to attend extra days if I'd missed any for some reason. Despite all this, you sometimes have to learn the spells again if they should happen to wear out. After all that learning you'd think they would last forever, but they don't.

With so many differing styles of RPG coming out it is really something of an impossible task to try to give detailed guidelines to playing all of them, but the above manages to cover most aspects of the more popular types of game. Building up characters, gaining experience, fighting when appropriate and running away if necessary, getting jobs and money, all that kind of thing, do appear in most games. So do puzzles of one sort or another, but guidelines to those cannot be given any more than they can be given for traditional adventures. You've just got to use your brains!

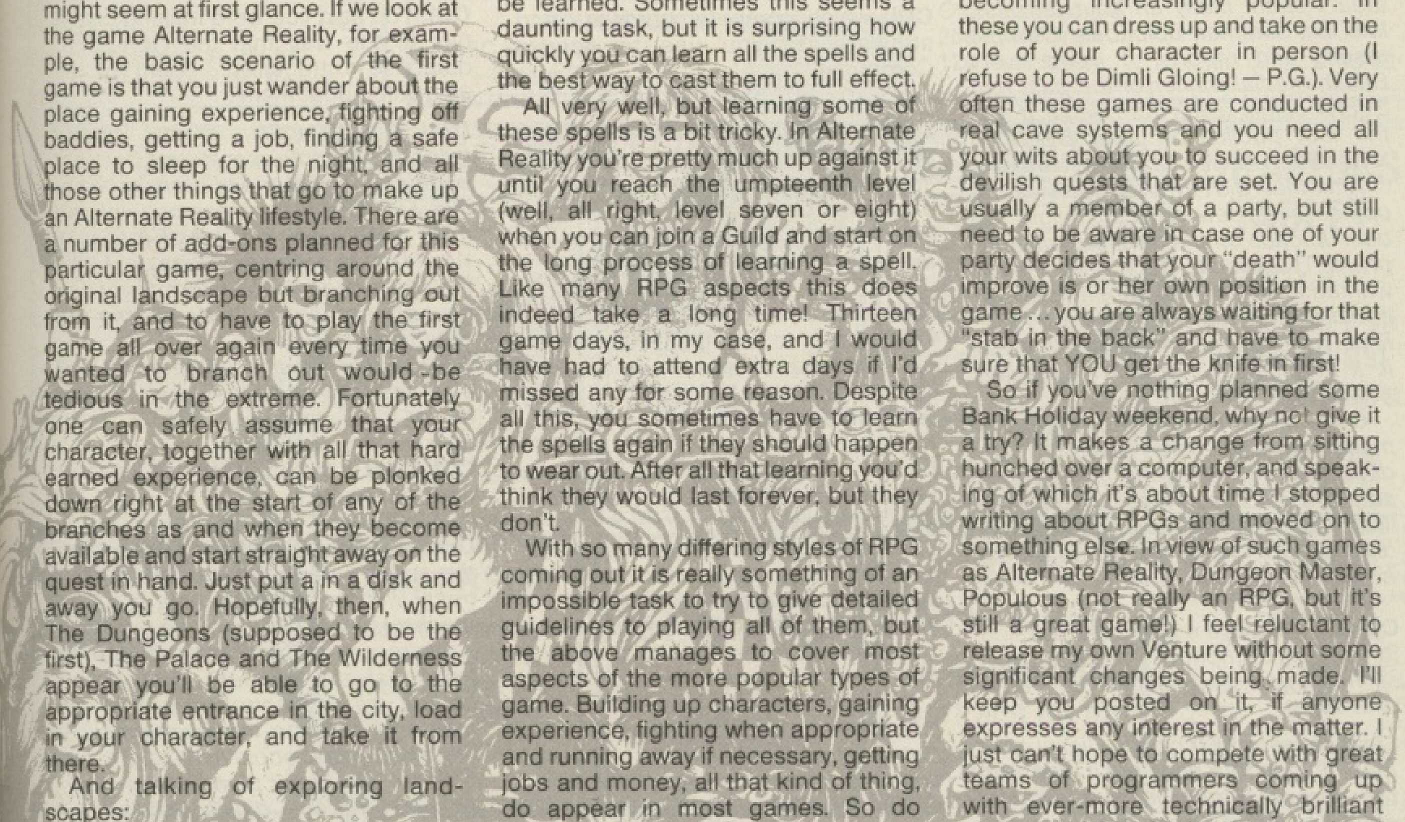
At least there is one consolation. In the traditional adventure many problems arise as a result of an indifferent parser. You know what the solution is, but you cannot get the parser to accept it because it hasn't been programmed with what you consider to be an adequate vocabulary. This sort of thing very rarely arises in an RPG, just because they rely more on actions rather than words, and if they do have a vocabulary of some sort then you are gradually told what it is, thus negating the need to go scouring through a Thesaurus in order to find another word for PUSH, or whatever word might be causing the problem.

But don't worry, this lack of vocabulary doesn't seem to be stopping the games designers from coming up with ever more ingenious puzzles. Anyone who has tried to get the key from behind the descending gate in Dungeon Master will know the sort of thing I mean. Stepping on one panel lowers the gate, and that seems to be the only route to it. Pressing a switch opens it, but then to get to it you have to step on the panel again and close the wretched thing. It can be done, with a lot of careful thought, but it had a few of us baffled for a while. And, if a few of you fancy combining in an RPG, what about …

Live role playing games are also becoming increasingly popular. In these you can dress up and take on the role of your character in person (I refuse to be Dimli Gloing! – P.G.). Very often these games are conducted in real cave systems and you need all your wits about you to succeed in the devilish quests that are set. You are usually a member of a party, but still need to be aware in case one of your party decides that your "death" would improve is or her own position in the game … you are always waiting for that "stab in the back" and have to make sure that YOU get the knife in first!

So if you've nothing planned some Bank Holiday weekend, why not give it a try? It makes a change from sitting hunched over a computer, and speaking of which it's about time I stopped writing about RPGs and moved on to something else. In view of such games as Alternate Reality, Dungeon Master, Populous (not really an RPG, but it's still a great game!) I feel reluctant to release my own Venture without some significant changes being made. I'll keep you posted on it, if anyone expresses any interest in the matter. I just can't hope to compete with great teams of programmers coming up with ever-more technically brilliant games, so I think it's hey ho to the local cricket ground and a bit of peace and quiet while I think about something else. Bye for now!

P.G.



The Dral Speaks

Recently Peter Hardcastle, better known to Compunet users as NETFAX or 'The Dral', took over the database editorship from Jane Firbank who had been in charge since the system was created. CCI interviewed Peter using Compunet's Courier electronic mail system. 'The Dral' tends to work late and most of his replies had a time stamp of around three in the monring.

CCI: Before becoming Compunet's new editor you were probably best known to Cnetters for your NETFAX area. Why did you start it?

Dral: *Well, when I had been on Cnet for a few months I was itching to upload something big. My first real area was Z00TV, a TV related area, which included SEOUL, a massive Olympic area. I spent many an hour (at 5am) late last summer, uploading Olympic results and reports. It listed every British medial winner of the past and EVERY single result from Seoul. It was the first publication after BBC1 to report Ben Johnson's Drug scandal.*

After that I did HNEWS which was an upload every few days to hi-light the best uploads on the net. This was part of -METNET-'s NETREV area. I soon wanted to be independent and knew I could do lots more so I started NETFAX. To my amazement people loved it. If they hadn't I wouldn't be editor now.

Other areas were DRAL, a general magazine with many different subdirectories including my home made software which is now at DRALH in the 'Hall of Fane' and TODAY a day by day diary of happenings on that days date from years gone by.

CCI: Do you have a particular passion for any of Compunet's 'added value services' such as Federation II, PartyLine etc?

Dral: *I'm not a FED player. Diesel gave me a guided tour once but it didn't get me hooked. PartyLine is a different story. I'm one of it's biggest users after midnight. Where else could users get such easy access to the man with his finger on the button? (Or his head on the block?)*

CCI: Do you use any online services other than Compunet?

Dral: *Yes, I use Prestel and Micronet a lot. I've been a subscriber on there for about three years. My wife uses it a lot too. I was known as 'Par' on there. Don't ask me what a 'Par' is!*

CCI: which computer hardware and software do you use to access Compunet?

Dral: *I use my trusty CBM 128 and 1541 disk drive which is acting up something terrible at the moment. Oh, and the Commodore Modem of course. I use ALL the utilities that are available for use on Cnet.*

CCI: What does the editors job entail? On my visits to 'Compunet Towers' in the past I was always amazed by the vast range of jobs being worked on by Jane simultaneously.

Dral: *I'm specifically the 'Network Editor'. That is, I look after the 'online' side of things only ...*

I answer queries by electronic mail, sort out rows, help new users get started, look out for bad language and abuse and generally keep things tidy by moving uploads around or erasing them from the system if they are dated.

I'm also there to keep the users informed by uploading news flashes. But most importantly I try to be noticed, to show the users I'm there, online, every evening, throughout the evening. So if they need information I can usually reply within five minutes.

CCI: Tell me about your typical working day ... (or night?)

Dral: *My typical working day starts late in the afternoon with a telephone conversation with all of the 'departments' in the Cnet office. I am a 'remote' editor working almost three hundred miles away from the office, so all my queries, complaints and problems from the previous night (which couldn't be sorted out instantly) are dealt with next afternoon.*

Any work on the 'net (new Gotos, Banners, moving items into different areas etc.) is also done late in the afternoon before most of the users arrive online at 6pm. I also gather information for all the 'departments' to use for that nights 'System News'. I upload the news in time for the main bulk of the users arriving and then it's just a case of being there in case I'm needed. Once again — answering queries, keeping the 'net alive and motivated!

Some nights I find I can't get out of my mailbox till about 9pm due to the amount of queries and requests (and friendly chat of course). From 9pm onwards I look around the 'net and even manage a few uploads myself. From midnight onwards I chat on PartyLine and answer any new mail before logging off around 2am. It sounds a long day but remember, I can do it in bed if I want to. The 128 has a nice long power lead!

CCI: You said you were making changes to the way that the Compunet database is structured — could you tell us a little about them?

Dral: *Yes, it's nothing drastic. When I was just a humble user I found the front page a bit formal and not very informative. Also lots of the areas beneath the front page were in a bit of a tangle. What I am to do is tidy things up. Make the front page more informative and give novice users a better change to get going quickly.*

New banners and alpha-gotos will also make the system prettier and easier to navigate.

CCI: What is the future of the C64/128 on Compunet?

Dral: *You could say that it depends on the users. If people don't sell off their trusty friends for the glamour of 16 bit machines there should be no problem.*

We're going through a change of trends at the moment. The online coders are concentrating less of demos and more on utilities, especially utilities to help people use Compunet.

There are major plans going on to enhance the 64's online software so there is certainly NO question of us trying to shove it out of favour. Other computers will arrive but we won't forget the machine that Compunet was made for.

continued on page 64

arts late
ephone
depart-
am a
t three
ffice, so
d pro-
(which
tly) are

Gotos,
ifferent
in the
users
gather
ents' to
lews'. I
e main
hen it's
ase I'm
wering
e and

out of
to the
s (and
9pm
et and
myself.
at on
v mail
am. It
r, I can
has a

chan-
punet
ou tell

When I
e front
orma-
th the
angle.
Make
e and
ge to

s will
r and

4/128

ds on
their
16 bit
blem.
ge of
online
f de-
cially
unet.
on to
re so
of us
Other
won't
unet

age 64

LAN COMPUTER SYSTEMS

SHOWROOM OPEN MON TO SAT 10.30am TO 5.30pm TELEPHONE 01-597 8851 (5 lines)

WIN A MONITOR, DISK DRIVE, SOFTWARE IN OUR PRIZE DRAW

AMIGA 500

LAN AMIGA SOFTWARE PACK

LAN AMIGA SOFTWARE PACK
AMIGA 500
Free 20 programs condensed onto 2 disks for your convenience
***FREE* MOUSE MAT *FREE* DUST COVER *FREE* £100 OF SOFTWARE WITH YOUR AMIGA– YES YOU CHOOSE THE SOFTWARE YOU WANT WITH YOUR AMIGA (£100 RRP) IF YOU WISH TO ORDER A TV MODULATOR THEN YOU WILL HAVE £75.00 TO SPEND ON SOFTWARE**
£419 INC VAT

PACK 1
Winter Games, Out Run, Final Assault, Wizard Warz, Leader Board, Birdie Golf, Marble Madness
£39.00

A5000 COMPUTER
+ Introduction to the Amiga Manual + Amiga Basic Manual + Mouse Controller + The Very First Disk + Work Bench Disk + Extras Disk
ALL FOR £299 + VAT YOU MUST BUY ONE OR MORE PACKS WITH YOUR AMIGA

PACK 5
Hellbent, Better dead than Alien, Quadralian, International Soccer, Star Goose, Winter Olympiad, Back Lash, Out Run, Attack, Marble Madness
£45.00

PACK 4
20 3.5" Disks 3.5" Cleaning Disk, Joystick, Dust Cover, Mouse Mat
£49.00 + VAT

PACK 2
Amegas, Art of Chess, Barbarian, Insanity Fight, Ikari Warriors, Buggy Boy, Mercenary, Terrorpods, Thundercats, Wizball, Marble Madness
£39.00 + VAT

PACK 3
12 GAMES
Grid Start, Eco, Karting Grand Prix, Wizball, Thai Boxing, Terrorpods, Flightpath 737, Barbarian, XR36, Obliterator, Las Vegas, Marble Madness
£59.00 + VAT

PC

COMMODORE
PC III SD

MONO	£499
COL	£633
ECD	£755
PC10 III DD	
MONO	£553
COL	£689
ECD	£815
PC20 III HD	
MONO	£735
COL	£864
ECD	£989

We also stock full Commodore PC Range

AMIGA 2000

A2000 B Computer	£849.00
20mb Hard Disk for Amiga Dos	£399.00
8mb Ram Board Populated to 2mb	PHONE
AT Bridge Board for 2000	PHONE
68020 Co. Pros for 2000	PHONE

NO FLICKER IN HI RES

NEC Multisync II + Flicker Fixer	£689.00

Turn your Amiga 2000 into a 512k PC

XT Bridge Board 5.25" Disk Drive	£249.00
20mb Hard disk for Amiga PC Dos	£199.00
2mb Ram Board Unpopulated Chips needed are 258 x 1bit Dram 120 ns or faster	£135.00

SPECIAL

Okimate 20 Colour Printer
Free Paper Roll
Free Roll Paper Holder
£120.00

PRINTERS

Panasonic KXP 1081	£145.00
Star LC10	£169.00
Star LC10 Col	£215.00
Star LC10 Sheet Feeder	£55.00
NEC P2200	£279.00
Epson LX800	£169.00
Star LC24/10	£278.00
Star LC24/10 Sheet Feeder	£55.00
Okimate 20 Col Printer	£120.00
NEC P6+	£489.00
NEC P7+	PHONE
Citizen 120D	£129.00

Large range of alternative Printers available.
Please phone for quotation.
ALL PRICES EXCLUSIVE OF VAT

ACCESSORIES

Mouse Mat	£4.95
Dust Cover – Computer	£7.95
Dust Cover – Monitor	£9.95
Dust Cover – Disk Drive	£5.95
3.5" Disks (box 10)	£14.95
5.25" Disks (box 10)	£9.95
Disk Boxes from	£2.00
Copy stand A4	£19.95
Data Switch 2 way	£29.95
Data Switch 4 way	£39.95
Joysticks from	£7.00
Monitor stands	£7.00
Printer Paper from	£9.95
Printer Ribbons from	£3.00

All Accessories inclusive of VAT

MONITORS

Special offer Monitors	£189.00
Philips 8833	£219.00
Philips 8852	£258.00
Philips 9073	£369.00
Philips Monitor Green	£69.00
Philips Monitor Amber	£79.00
NEC Multisync II	£459.00
Commodore 1084S	£238.00
PHILIPS TV MONITORS	
15" FST Screen	£189.00
15" FST Screen + Remote Control	£225
15" FST Screen + Remote Control & Teletext	£242.00

All TVs complete with cables to your computer.

GRAPHICS TABLET

12" x 12" D/Button Pen Type Stylist and Software
£369.00

DIGITISING

PANASONIC WV1410 Camera with 8.5mm lens £217.00
Copy Stand £52.00
Digi Droid £52.00
Software in stock

SUPERPIC

Real time colour frame grabber. Grabs video or live signals at 1/30 sec Inc Genlock all for £499

SPECIAL

LX800 PRINTER ONLY £159

3.5" Disk Drive

with through port and on/off
£69 + VAT

LANSOFTCLUB LANSOFTCLUB
The computer club for Amiga and ST Users everywhere, all prices include VAT
Membership £20 per year
SO WHAT DO YOU GET?

	RRP	LANSOFT
Tau Ceti	£24.05	£5.00
Hacker II	£24.95	£5.00
Ogre	£24.95	£5.00

So you can save up 80% off you software on our special club promotion

For every £20 you spend with us you will get a ticket for the draw.
The more you spend the more tickets you will have.
But you must show this ad to get your tickets
First Prize: Colour Monitor Second Prize: 2nd Disk Drive
30 Runners up will get a Games software title

CCI

HOW TO ORDER
Enclose letter with cheque, postal order or credit card number for amount including VAT and delivery charge £10. Credit card holders may order by telephone. Contact sales desk. Despatch normally in 24 hrs. Official Orders from Educational Establishment, Local Authorities and Government departments welcome. Contact Educ. Dept EXPORT HOTLINE 01-597 8854 FAX 01-590 6057
Dealer and Export Enquiries: Contact Trade Dept.
Prices exclusive of VAT unless otherwise stated and correct at time of going to press.
Education callers ask for Tony Judge or Mark Butler
Come in and see us at 1063 High Street, Chadwell Heath, Romford, Essex

STAR LC-10 COLOUR

Has the age of the colour printer finally arrived? Alastair Statham tries out a new contender for the low price crown.

There was once a time when colour printout from a personal computer was well beyond the scope of most people's equipment or, more importantly, their budgets. Today, that is thankfully just a bitter memory. There are now several printers, costing between £150 and £300, which are capable of delivering reasonable quality colour output. The Star LC-10 is one such printer.

Based on tried and tested dot matrix technology, the LC-10 provides both colour and near letter quality text. By making multiple passes over each line it can print characters using up to 18 by 23 dots. Bit-image graphics in quad density have a resolution of 240 dots per inch. Print speeds vary between 120 characters per second in draft pica and 30 characters per second in near letter quality pica. While graphics and near letter quality text are printed in only one direction, the draft setting can also operate in bi-directional mode.

The four-colour fabric ribbon is contained in an easy-load cartridge and has an expected life-span of around one-million characters per colour. The black, red, yellow and blue coloured bands of ribbon produce seven different colours. Mixing pairs of the red, blue and yellow bands produces the three intermediate colours of green, violet and orange.

This standard configuration includes: A Centronics compatible interface (uses 7 or 8 eight bit data) and an 8k printer buffer, although this is reduced to one line of text when downloadable characters are used. A simple switch setting determines whether the LC-10 will emulate an Epson LX-800 or an IBM Proprinter II. The Epson JX-80 driver supplied in Workbench Preferences seems to work with the Epson setting.

The standard character set contains ninety-six ASCII characters while the IBM compatible set contains two hundred and forty-four including ASCII, international characters, symbols and simple block graphics. The fourteen international character sets include French, German, English, Danish, Swedish, Norwegian, Italian, Spanish, Latin-American and even Japanese. If all this is insufficient then up to one hundred and ninety-two characters can be downloaded in draft mode. This figure drops to seventy-eight when printing in near letter quality.

In draft mode there is only one type style that may be used with or without an italic slant. The near letter quality mode, however, allows three type styles, each of which are also available in italics. The styles are Courier, Sanserif and Orator. Both Pica and Elite print pitches may be used in either normal or condensed mode and proportional spacing can be selected for all four resultant pitches. Extra large characters can also be printed using double height, double width, both together, or even quadruple height and width. Line spacing defaults to one sixteenth of an inch but is also programmable in eighths, seventy-

STAR LC-10 COLOUR

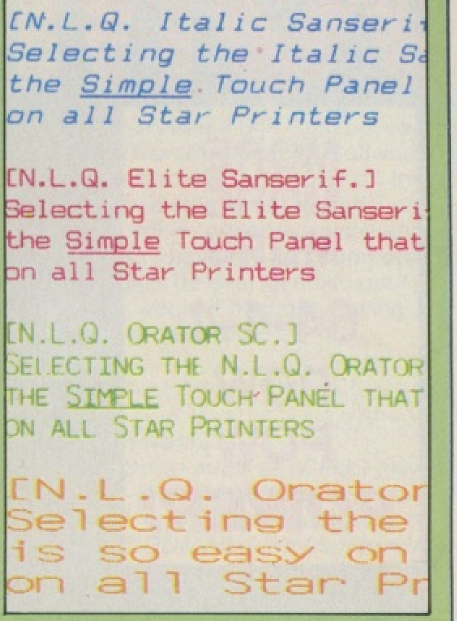
seconds or two hundred and sixteenths of an inch. A print width of eight inches allows the printing of between eighty characters per line using Pica and one hundred and sixty with condensed Elite. Normal Elite gives ninety-six and condensed Pica one hundred and thirty-seven characters across the line.

> ***'One of the attractive features of this printer is the clever paper parking mechanism'***

Single-sheet paper measuring five and half to eight and a half inches wide is easily accommodated in a neat single-sheet feeder. Loading may be either manual or semi-automatic. The semi-automatic mode accurately feeds the paper ready for printing. Fan-fold tractor fed paper can also be used. This can vary between five and ten inches wide and up to three-ply multi-part. One of the attractive features of this printer is the clever paper parking mechanism. This relieves the need to remove Fan-fold paper from the tractor mechaniam in order to produce the odd friction-fed single-sheet document. Parking is achieved by setting the printer offline and then pressing both the paper feed switch and print at the same time. The paper is automatically withdrawn from the platen. Moving a release lever now selects single-sheet feed. Unparking is even easier as it only requires you to move the paper bail and set the release lever to its former position. Once the Fan-fold paper has realigned itself the bail is replaced and printing can resume using the tractor feed. This is as simple and effective a system as I have ever seen on this class of printer.

The controls of the LC-10 are well thought out and easy to use. With the exception of twelve DIP switches under the top cover which are used to select the rarely changed settings, all of the controls are on the top right face of the printer. The DIP switches control functions like default page length, character set and whether the buffer RAM will be used as a print buffer or to hold a downloadable character set. International character set selection and emulation mode setting is also by DIP switch. Using these controls it is also possible to disable automatic carriage returns, the auto-sheet feeder and paper-out detection. Orator type style can use either small capitals or true lower-case letters. These are selected by another simple switch setting. The front panel controls are used to select more frequently changed settings. The controls consist of four membrane switches with ten small rectangular LEDs which indicate the settings selected. The four switches are marked Online, Paper feed, Print Pitch and NLQ type style although combinations of these switches do perform other functions such as the parking action mentioned earlier. All except the paper feed switch beep when pressed and the adjacent LEDs indicate their current status. One of the LEDs lights to indicate that the power is on, as controlled by a rocker switch on the left front face. The style indicators show whether courier, sanserif or orator style is selected and whether it will print in italics or not. Four more show whether the pitch selected is Pica or Elite and whether or not it is printing condensed or using proportional spacing.

> ***'The LC-10 is packed with features and is probably the quietest dot matrix printer I have heard for a long time'***


[N.L.Q. Italic Sanseri
Selecting the Italic S
the Simple Touch Panel
on all Star Printers

[N.L.Q. Elite Sanserif.]
Selecting the Elite Sanseri
the Simple Touch Panel that
on all Star Printers

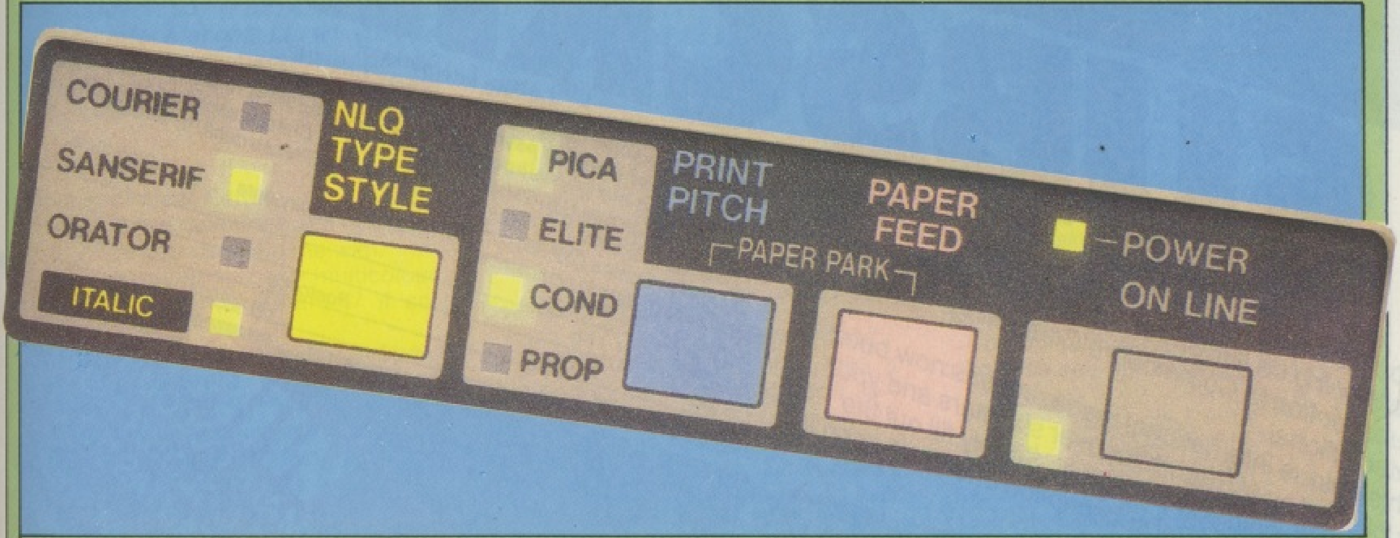
[N.L.Q. ORATOR SC.]
SELECTING THE N.L.Q. ORATOR
THE SIMPLE TOUCH PANEL THAT
ON ALL STAR PRINTERS

[N.L.Q. Orator
Selecting the
is so easy on
on all Star Pr

Despite its budget price the LC-10 is packed with features and is probably the quietest dot matrix printer I have heard for a long time. Even the test-mode selectable at power-on by holding down the appropriate front-panel switches provides both long and short test options. All of the expected highlighting features such as bold, underlined and overlined text are available together with both subscript and superscript. The repertoire of commands available though escape codes is enormous and includes page formatting, character control and most of the front panel operations. The quality of the NLQ text is superb. The colour printing is probably more suitable for producing colour text, charts and graphs than high quality artwork but if all you need is a good quality NLQ printer and the ability to produce the odd colour hardcopy then the STAR LC-10 could well be the machine for you.

A.S.

Price: £299.95.



COMMODORE
JUNE 1989
MORE
MORE
MORE
64-4-4
POW
POW
POWER!
HEARSAY 1000
FORECASTER
DECISION MAKER
DELUXEPAINT III
RUNNING MAN
CRAZY CARS II
RUN THE GAUNTLET
RENEGADE III
BREACH

SUBSCRIBE!

You can keep up to date with everything that's happening on the Commodore scene by taking out a subscription to Commodore Computing International.

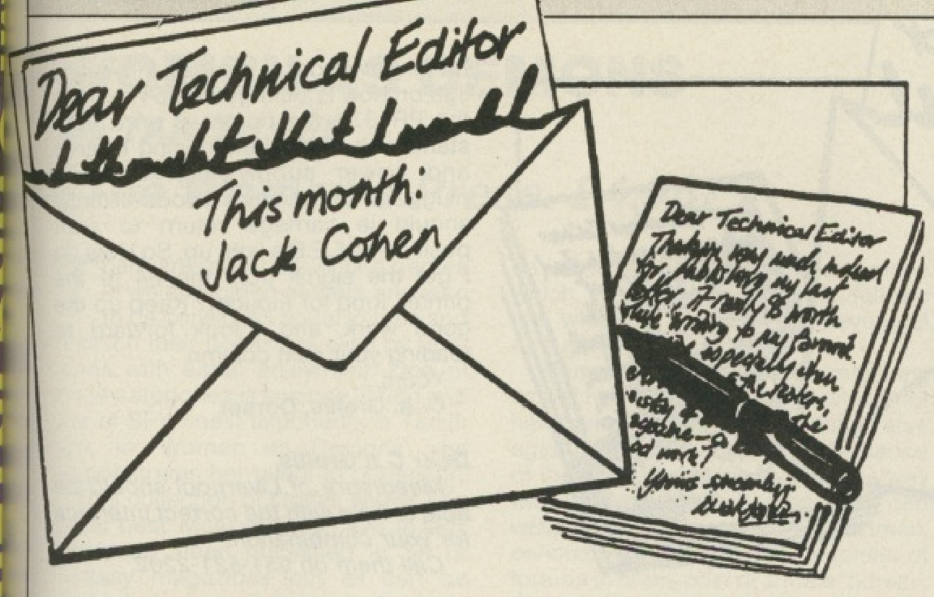
This unique international magazine has now been published every month for over six years and you can have it mailed to you direct. Simply fill out the coupon for this special subscription offer, and send it to us now.

To: Commodore Computing International
120-126 Lavender Ave, Mitcham, Surrey CR4 3HP.
Please make cheques payable to: CROFTWARD LTD.

Please send me 12 issues of Commodore Computing International
☐ Subscription rate U.K. £16.50
☐ Europe £26.50
☐ Outside Europe £39.50 Airmail
Date subscription to commence
Name
Address
County
Telephone (home)
☐ Cheque enclosed
☐ Please debit my Access Card No
Expiry date
Signature
Postcode
(business)

WIN!!
AN OKIMATE COLOUR PRINTER
A PHILLIPS COLOUR MONITOR
LOADS OF FANTASTIC SOFTWARE

GREAT NEW PROGRAMMING SERIES!



Dear Technical Editor,

Like your reader Gary Voelovfirth, I have also unexpectedly been given a CBM+4.

I want to use it to learn BASIC programming on rather than for games; although I'm not averse to using it to play games on.

Unfortunately, though, I have no leads, to connect it with either cassette or disk drive, to store programs on.

Could you give me an address of any suitable dealer(s) who could supply me with the necessary lead(s) and related hardware for the +4? Also do you know where I could get the manual for the +4? At the moment I'm using other Commodore manuals for general info about Commodore computers, but would prefer something aimed at the machine itself and can't find anything on the +4.

Yours,
Gareth Hughes

Dear Gareth Hughes,

Suitable leads can be obtained from Meedmore Distributors Ltd of Liverpool on 051 — 521-2202.

Computer Manuals Ltd who have a 24 hour Mail order book service on 021-706-6000 may be able to help with your manuals.

Dear Technical Editor,

I have a few questions and opinions that I hope you can help me with.
1) Is it possible to have multicolour UDGs on a Commodore 64? If so, how?
2) What are 'software sprites' and how are they different from hardware sprites?
3) Would you recommend me to buy the 'Commodore 64 Programmer's Reference guide'? Where would I be able to get a copy from?
4) Where can I find Rae West's book 'Programming the Commodore 64' as the publishers, Level Ltd., cannot be traced by British Telecom?

Yours,
C.D. John, Gloucestershire

Dear C D John,

1. Yes it is possible.

First enable Multicolour mode with POKE 53270,PEEK(53270)OR 16 Then to enable any particular character set the value in the corresponding colour RAM location.

0 to 7 = ordinary mode and 8 to 15 for multicolour mode so that bit 3 in a colour RAM location determines in which mode the character will appear.

This means the screen can display different characters in either mode at the same time.

2. I think that what is meant by software sprites as opposed to hardware sprites is that the hardware maintains up to 8 sprites at a time automatically (by the VIC II chip), but software sprites can be generated by using Raster interrupt special techniques.

3. Try a good bookshop and get them to order the book by quoting the ISBN number 0-672-22056-3, either in the UK or the States.

4. The official distributors for Rae Wests' book are Biblios Dist Ltd. Star Road, Partridge Green, Nr Horsham West Sussex RH13 8LD
Phone:- 0403-710971

Dear Technical Editor,

Each day I pass a dowdy second hand shop and on the shelf was a Commodore +4. I felt sorry for it so I went in and bought it. The chappie in the shop let me have it the cost, the price of the tape recorder. So what was the mystery. I took it all home and it all worked with the few tapes and the integrated software.

So I went out and bought your magazine to find out why it was going so cheap, then it all came to light. The user's manual stated 64K Ram but you cannot use Commodore 64K Software only 16/+4 and that has gone off the market. Now a little about myself. I am a Sinclare 48K+ microdrive user and up in the loft I have my first computer Vic 20. Would it be best for me to put +4 up in loft or would it be worth buying a Commodore disk drive.

Yours,
Brian Nash

Dear Brian Nash,

A user group such as ICPUG (see advert in this issue) have a fair amount of C16/PLUS4 software of the PUBLIC DOMAIN kind (that is non copyright) available to members and there is no charge for the copying (only post and packing and medium).

There is certainly enough of it to get you started and perhaps help you create your own software.

If you dont feel like programming then by all means put your PLUS4 in the loft and buy an Amiga instead.

You will find lots of Amiga software advertised in CCI.

Dear Technical Editor,

I'm a French reader of CCI (the best!!!). I have a C128 and a 1571. The last one (the 1571) gave a lot of problems. I can't load a game correctly. The drive makes strange and unhabitual noise, and that's all. Sometimes the drive loads but that's about it. It stops load when the soft goes over 30 blocks. I think that it's a problem with the alignment of the head ...

I hope you have understood my problem and you have a magic solution ...

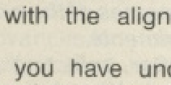
With all my thanks
Fahice

Dear Barral Fabrice,

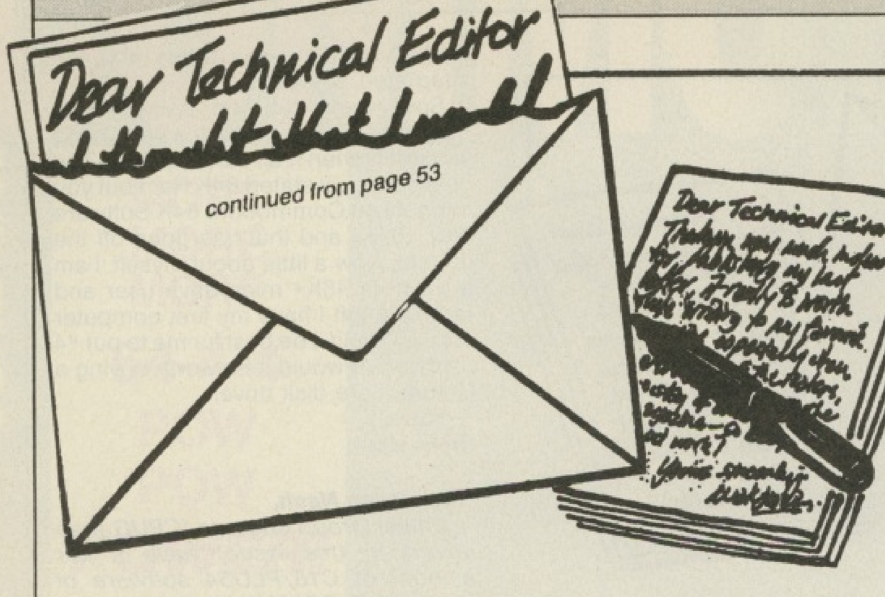
From your description the problem is most likely to be misalignment of the heads.

Can you load your own recent programs but not those from commercial diskettes, or older programs of your own creation, because if so then that is another indication of misalignment.

Contact a local repairer if possible, otherwise see our Magenta pages.



cont. on next page



continued from page 53

Dear Technical Editor,
I am trying to print off Prestel use a Compunet modem + CBM 64/128 A Mustang Disk (s.2 Turbo version) with a Citizen printer + A Super-G Interface. I can use the above to print out on compunet alright. Also just with the computer. But not with Prestel.

All the people I have asked said you have to set the printer Dip Switches right. I have tried alsetting but if it prints it just print numbers and graphics. Can you tell me how I can get it to print OK?

Yours,
A. Jones

Dear A Jones,

You have not mentioned what procedure is being used to try and print Prestel frames.

The Mustang software menu incorporates a 'select devices' choice.- Have you tried all the combinations?

Ignore the names of the printers etc in your experiments.

Activate after selecting a frame with C= and p in Viewdata mode.

One of the choices should work without dip switch alteration since printing of Compunet frames is ok.

It is possible that the Super G interface is being upset by Prestel control characters and this is the reason for trying different menu choices.

If other readers have this particular combination I will be interested to hear about your solution.

Dear Sirs,

1) I was interested to read the ad on page 7 of your April issue in which it was stated that the advertiser "stongly condones" piracy. This was such a refreshing change from all those boring old nybbler disclaimers in which piracy is either "strongly condemned" or "not condoned'.

Do they also strongly condone bouncing checks? (or "cheques" as they spell it in limey land).

2) In the same issue (p.84, col.3), in the technical column, the 1581 command "U0760" was mentioned. This is like the 1571 comment "U07M0" which locks the drive into 1541 mode — except that with the 1581, you only shut off burst mode, rather than also shutting off double-sidedness.

(1581 owners might want to read the designers' "secret" messages — errors 79 and 7a. To read message 7a:

```
10 open 1, dv, 15: rem dv = 1581 device
20 print 1, "m-w" chr$(0)chr$chr$(5)
chr$(169)chr$(122)chr$(76)chr$
(63)chr$(255)
30 print 1, "m-e"chr$(0)chr$(3)
40 input 1,e,e$,t,s
50 print e;e$t;s
```

Some early 1581' are supposed to need a different floppy controller chip and a bleeder resistor — check with Fred Bowen at Commodore USA.

Yours,
Joel M. Rubin, USA

Dear Joel M Rubin,

As you say this is a good example of a Freudian slip and makes one wonder what he meant to say!

Joel also has some ideas for Andy (April 89 issue) to think about.

Dear Sirs,

I have just picked up a copy of your excellent mag from my local news stand, and found it to be very informative, so I now put in a regular order for CCI each month.

Perhaps you gents of infinite wisdom and oracle of great knowledge of things technical could help with a problem I am experiencing. I have a Commodore 64C which about 1 year old, and recently I've managed to acquire an Olivetti PR1370 Printer (Dot Matrix) I wonder if you can throw any ligh on how I could get the 64 to drive the PR1370, the printer is on a floor stand with a lot of interfacing boards and power supply inc, when its plugged into the mains it does all that it should ie carriage return to start position all L.E.D.s light up. So How do I get the signal from the 64 to the printer, food for thought? Keep up the good work, and I look forward to reading your next column.

Yours,
C. A. Grellis, Dorset

Dear C A Grellis,

Meedmore of Liverpool should be able to help with the correct interface for your combination.

Call them on 051-521-2202.

Dear Technical Editor

In the May 1989 issue of your mag, in the write-in section you got a letter sent to you asking about one of those "RESET CARTRIDGES". Well I have one. The point of this letter is that you told the other writer how to use the cartridge, but I tried typing and while the game is suspended and tried getting a menu but nothing happened. Could you please tell me what else I can do! I would be very pleased if you could help me.

Yours,
Paul Taylor, Ilkeston

Dear Paul Taylor,

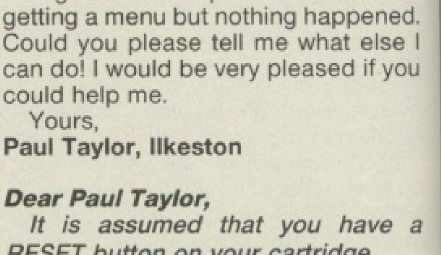
It is assumed that you have a RESET button on your cartridge.

When the game is running press the button and a MENU should appear.

Use the cursor keys to position over the MONITOR command and press RETURN.

Either 1. make necessary alterations in memory and then use button to retrieve the MENU, position cursor over CONTINUE and press RETURN.

Or 2. type X to return to BASIC and make the necessary POKES and again press RESET button and CONTINUE as above.



WOMEN AS DEMONS

by TANITH LEE

(The Women's Press. £4.95)

There are only a few writing genres in which women authors are seen to be considred equal to men and in which their books are read by both sexes with equal enjoyment. One of those categories is science fiction and one of SF's finest exponents is Tanith Lee. In 'Women as Demons' she demonstrates her talent to perfection.

This collection of stories shows Lee at her best. Most of them have, in fact, previously been published in SF or Fantasy magazines but all can be re-read again and again and something new found with each reading.

As in all collections there are some stories which stand out. For me, in 'Women As Demons', these included 'The Unrequited Glove', (a cross between Edgar Allen Poe and 'The Beast With Five Fingers'), in which love-'em-and-leave-'em Jason Drinkwood loves and leaves once too often. His discarded 'amour', Alys, though seemingly accepting his rejection is not as complient as she may appear and not as innocuous, either, for Jason finds he is hounded by Alys's mauve glove which, like a malicious spider, follows him wherever he goes. With eventual dire consequences.

Women as demons, as sorceresses, as witches, as heroes, (yes, heroes, not heroines, which is something else again), Tanith Lee writes with brilliance of them all. She has a marvellous way with a descriptive phrase and can write in any form, as man or woman, serious or with humour, as a soldier of fortune in times past or a male 'purser', (link between passengers and crew in the excellent 'You Are My Sunshine'), on a solar spaceship of the future.

Winner of several awards for short stories and of the August Derleth Award for her novel 'Death's Master', Tanith Lee's 'Women As Demons' is a bargain at £4.95 and the Women's Press is to be commended for launching a SF series which brings, in addition to Lee, at least nineteen other female SF writers to the fore.

D.M.

HIGH-TECH SOCIETY by TOM FORESTER (Basil Blackwell Ltd 108, Cowley Road, Oxford OX4 1JF £12.95)

'High (or 'Hi')-tech' is now an everyday word in our society. It covers a multitude of electronic concepts from the first electronic digital code breaking computer, Colossus, built in 1943 in Bletchley Park, Hertfordshire to today's (almost here) fifth generation state-of-the-art wonders which will incorporate every modem technological achievement. In 'High-Tech Society', Tom Forester records the story of this revolution that is transforming our lives. And what a story it is.

When Colossus and its American counterpart ENIAC were first presented to the world only in science fiction were foreseen the enormous changes the computer would generate within forty years.

Tom Forester is a Lecturer in Computing and Information Studies, he is also an erstwhile journalist, which is probably why this book is so easy to read. He knows the advantage that line drawings have in emphasising a point and is ably served by David Austin's witty cartoons.

The rivalry between the U.S.A., Japan and, to a lesser extent, the U.K. to produce more and better computers has never been more fierce than now. The 'neural' computer, which can recognise and talk back to the operator, is already here; graphics that can reproduce themselves as three-D models from a solidified liquid have recently been demonstrated; the talking 'map' is already being installed in automobiles. No matter what interests modern man or woman it's almost certain that somewhare, at sometime, a computer has improved it. *(Excepting at least one thing I can think of. Ed)*

Forester goes into the microchip world in all its detail. From those (comparatively) humble beginnings through mainframes, micros, information technology, artificial intelligence, personal computers, word processors, et al. If it's to do with high-tech you'll find it in this book.

But it's not dry as dust information. Everyone knows about robots but how many know that the term was coined, in 1921, by Czech playwright Karel Capek? He took the name from the Czech word *robots*, meaning forced or slave labour, and called his play *Rossum's Universal Robots.* The first time the word was ever heard.

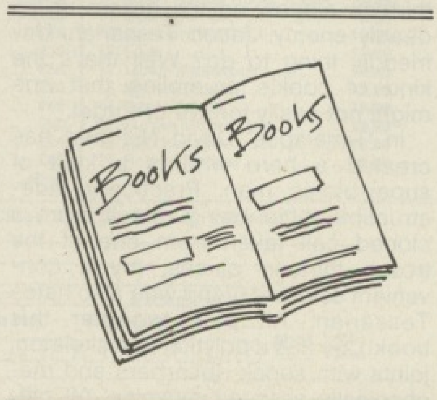
The engineering scientists of 1921 probably expected that by 1991 everyone would have their own personal robots. One to do the day-to-day domestic chores and another to take the drudgery out of their working lives. How wrong they were. Housemaid's knees — believe it or not — are the rocks on which personal robots have foundered. As marvellous as the micro-chip is, on-one has yet been able to duplicate the intricate flexibility of the human knee joint in a metal counterpart. Have you even seen a robot going upstairs? The latest designs incorporate a tank-like tractor mechanism which is proving more efficient as a robotic 'foot'. But even that is still in the testing stage.

As for the electronic office, Forester says that although the advent of the microchip 'brought forth an avalanche of new products ... many of the predictions made in the late 1970's about the pace of developments in office automation were wide of the mark'. In fact a paper published in 1985 found that less than 50% of office workers had any kind of electronic assistance. And that the nearest most employees got to automation was a telephone, a calculator and a coffee machine!

Incidentially, Forester mentions that when the 'long-awaited' Amiga hit the market in 1985, along with the Atari ST, retailers were wary of stocking either of them due to the lack of software support. But while the ST languished the Amiga has, as we all know, gone from strength to strength, not least because of 'an acknowledged technical superiority of the Amiga's chip-set graphics'.

The advances in microchip technology will affect all of us, no matter what we do or who we live. 'High-Tech Society' is invaluable as a chronicle of our technological times, how it came about and what we can (possibly) look forward to in the future.

D.M.



cont. on next page

continued from page 55

'PEOPLEWARE' by Tom De Macro & Timothy Lister (Dorset House Publishing Co./John Wiley & Sons £18.25)

'Flow' is a condition of deep, nearly meditative, involvement which is necessary for mental work to go well. If, while you're working — or trying to — your phone rings incessantly, the paging system keeps calling for Joe Bloggs and the guy/girl at the next desk is chatting up the newest member of the workforce, you are in a 'non-flow' situation. So a job that should perhaps only take a matter of hours might possibly take days.

This circumstance happens very often to staff in open-plan offices so, contrary to what has been thought by many, open-plan offices are not always a good idea. They are, and I quote, 'a plague upon the land'.

In 'Peopleware' (Dorset House Publishing/John Wiley £18.25) Tom De Marco and Timothy Lister take shots at other modern icons, too.

'Paging', they say, should be done away with; every office should have at least one window; money spent on high-fashion decor is a waste; uniformity of dress isn't important. Human interactions, in fact, matter more than any other aspect of work.

What they advocate may seen tantamount to heresy to many manages. But then many managers, it seems, have no ability or aptitude for management anyway.

For optimum efficiency, particularly in a job that needs teamwork, the team needs to jell and a natural manager has a subconscious feel for what's good for the team. If members of the team, collectively or individually, are unhappy about their work environment, about other people in the team or just at the way in which a project is developing, the jelling process is affected to the detriment of the whole scheme.

De Marco and Lister, who have lectured, written and are now consultants on the subject of productivity, show how to make the most of the human resources at the command of most managers.

Office environment, obtaining the right people in the right way, (some managers don't even ask to see a sample of a prospective employees work and, as the authors say, 'you don't hire a juggler without first seeing him perform'), 'growing' productive teams. Everything in fact to help the administrator get the best out of everyone.

'Peopleware' treats a serious subject in an entertaining way which, nonetheless, puts its lessons over. This is a book for any administrator or manager, in no matter what field, who would like to improve the productivity of his workforce and benefit not only his company but, just as importantly, the people who work for it.

D.M.

TIMELAPSE by DAVID NIGHBERT (Headline Publishing Co. £3.50)

Anton Stryker was six when he was deserted by his mother and, not surprisingly, it left an indelible effect on his psyche. The other great trauma in his life was that, in his twenties, he was killed, chopped into no less than thirteen pieces, on the orders of his deadly enemy, Jacob Tessarian. Unfriendly thing to do? Well that's the kind of cookie crumbling that one might not easily forgive or forget.

In 'Timelapse' David Nighbert has created a hero who is a kind of super-bionic man. Practically indestructible, after being rebuilt, from a cloned cell taken from one of the frozen thirteen pieces, (by a convenient scientist friend who also hates Tessarian. All pals together this book!), he has a polytitanium skeleton, joints with shock absorbers and mechanically assisted muscles. All giftwrapped in a monomolecular membrane which is impenetrable to all but very high-caliber (sic) projectiles.

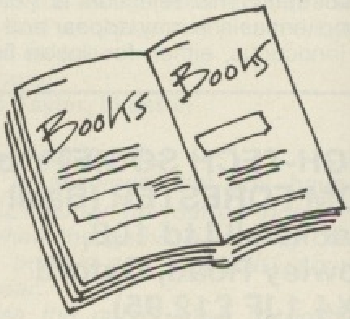
In addition to which he discovers that he has the capacity for thought-transierence, too. Which comes in very handy as it seems that Jacob Tessarian is none too pleased when he finds out that the guy he was sure was mince (or rather chopped) meat is now whole again, better than ever, and out for revenge.

Stryker not only bears a grudge because of his own death but also because he suspects that his mother's disappearance was organised by Tessarian, too.

Dr Wen, the scientist friend, discovers a plot by Tessarian to conquer the United Planets and knows that in Stryker he has the ideal weapon with which to assassinate the would-be dictator.

Of course, all is not plain sailing — or should it be 'spacing-travelling'? — because word is out that Tessarian himself is due to be cloned into another body soon. Tessarian's new body will be as good, if not better, than Stryker's which presents a problem. After all, what happens when two bionic men meet?

Tessarian may have a fleet of space ships and an army of troopers to do his bidding but Stryker, not surprisingly, manages to recruit a few helpers for the cause. Admittedly they are a motley bunch. Hersule Al-Ahmdi M.D. Ph.D, drug merchant, was previously involved in a set-to with a group of alients called the Hellcats who were finally massacred. Unfortunately for him one survived and Hersule who had fallen out with his partner — an implant specialist — during the enterprise wakes, after a fight with him, to find his mind has been transferred to the body of the remaining Hellcat. All Hellcats were nine feet tall, with sabre-teeth, long snake-like tentacles protruding from the corners of their mouths, a flap of skin instead of a nose and had blood red eyes with no pupils Hersule was, to put it mildly, shocked at his own new appearance.



Stryker's other two allies are a small girl named Sabrina and Hersule's space ship, Nefertiti, which is controlled by a computer who has a nice line in sexy talk. Oh, there is also Mara. She's the love interest, in more ways than one.

If found a few of the scenes a little too bloodthirsty, for David Nighbert belives in going into every gory detail, but this might be because I'm too squeamish and it is, after all, a small niggle.

'Timelapse' is this author's first novel. It's well-written, fast-moving and the way in which he draws together all the strands of what is quite a complicated plot to achieve a satisfactory ending makes the expenditure of £3.50 well-worth while.

D.M.

n's new
ter, than
problem.
en two

of space
o do his
risingly,
pers for
are a
ndi M.D.
eviously
roup of
o were
tely for
who had
implant
terprise
find his
he body
Hellcats
e-teeth,
truding
s, a flap
d blood
was, to
wn new

a small
rsule's
s con-
a nice
Mara.
e ways

a little
ghbert
detail,
m too
small

s first
moving
ogeth-
uite a
satis-
diture

D.M.

FIRST micro

HARDWARE & SOFTWARE SPECIALISTS
6 FOREST CLOSE, EBBLAKE IND EST.
VERWOOD, DORSET
BH21 6DA

PRICES INC. V.A.T
FREE DELIVERY

EXCLUDING VAT ☎ 0202 813176 **FREE DELIVERY**

AMIGA A500

+ **FREE £220 SOFTWARE**

INCLUDING:- ● PURPLE SATURN ● HOSTAGES
● INTERNATIONAL SOCCER ● WINTER OLYMPIAD
● SPITTING IMAGE ● STARGOOSE ● BACKLASH
● QUADRALIEN ● ELIMINATOR
● FANTASTICK F3 JOYSTICK
● TV MODULATOR

£339

AMIGA A500/ PHILIPS 8833

£520

AMIGA B2000/ PHILIPS 8833

INC ACCESSORIES

£1049

AMIGA A500

INCLUDING:-
MOUSE WORKBENCH
UTILITIES MANUALS
BASIC TUTORIAL
TV MODULATOR

£305

AMIGA B2000/XT BRIDGE BOARD 20Mb HARD DISC PHILIPS 8833

INCLUDING:-
MOUSE · WORKBENCH · BASIC ·
UTILITIES · MANUALS ·

£1390

AMIGA B2000

INCLUDING:- MOUSE · WORKBENCH
· BASIC UTILITIES · MANUALS

£869

A500 HARDWARE

A500 + TV MOD	£305
A500 + £200 GAMES	£339
A500 + 1084(S) HIGH RES COLOUR MONT	£520
A500 + lmb DRIVE	£399

AMIGA EXTERNAL DRIVES

Cumana Cax 354E	£87
AF880	£78
RF302C	£74
Supra 20mb H/disk	£499

★ All drives 1mb + on/off switch ★

AMIGA ACCESSORIES

A501-512k RAM	£113
TV Modulator	£22
Mouse Mat	Call
Amiga dust-cover	Call
3½ 135TPI DS/DD	Call

COMMODORE C64

C64 Hollywood	£129
C64 Entertainment	£173
1541CII 5¼C64 drive	£139
1581 3½/800K C64 drive	£112
Oceanic 5¼C64 drive	£109

A2000 HARDWARE

A2000 + 1mb RAM	£869
A2000 + 1084(s) monitor + bridge BD + 20mb H/disk	£1390
A2000 + 1084(s)	£1049
20mb hard disk	£269
XT bridge BD	£269

A500/A2000 MONITORS

1084(s) High res monit	£219
Philips CM8833 High res	£199
1901 C64 - colour	Call
1900 C64 - Mono	£119

PRINTERS

Star LC10 (P) 130CDS	£169
Star LC10 Colour	£216
Star LC24-10 (24 din)	£305
Citizen 120D	£105
Commodore MPS1230	£119
Panasonic KXP1124 (24 pin)	£279
Panasonic KXP1081	£149
Epson LX800	£158
Epson LQ500	£250
Epson FX850	£409
Epson FX1050	£382
Epson EX800	£369
Epson EX1000	£419

COLOUR PRINTERS

Citizen HQ40	£352
Epson EX1000	£543
Hewlett Packard Paint Jet	£719
NECP6+	£508
NECP7+	£624
StarLC10	£199
Xerox4020	£949

LASERS

Citizen overture	£1299
HP Laserjet II	£1825

BUSINESS S'WARE

	Sale £
AEGIS Sonix	£39
Animated Images 3D	£99
City Desk	£69
Deluxe Video	£49
Deluxe Music	£49
Deluxe Paint	£49
Digiview Gold	£109
Home Accounts	£19
Mailshot Plus	£39
Maxiplan A500	£69
Music Studio	£23
Organiser II	£49
Page Setter	£89
Page Flipper Plus	£24
Photon Paint	£49
Photon Video	Ring
Professional Page	£175
Pro Writer 2	Ring
Publisher Plus	£69
Sculpt 3-D Animate	£102
Sculpt 3-D	£63
Superbase II	£59
Superbase Personal	£44
Superbase Professional	£169
TV Show/Text	£79
Word Perfect 42	£169
'Works'	£69
Zumafonts	£25

UK TOP 19 GAMES

No.		Sale £
1	Falcon	19.99
2	Sword of Sodan	19.99
3	Dragon Master	19.99
4	Gales Dragon's Domain	19.99
5	TV Sports Football	19.99
6	Dragon Lair	19.99
7	Victory RD	19.99
8	Int Karate +	19.99
9	Speedball	19.99
10	Who Framed Roger Rabbit	19.99
11	Operation Wolf	19.99
12	Lombard RAC Rally	19.99
13	Elite	19.99
14	Motor Massacre	19.99
15	Mickey Mouse	19.99
16	Captain F122	19.99
17	Purple Saturn Day	19.99
18	Technocop	19.99
19	Rocket Ranger	19.99

ALL PRICES EXCLUDE VAT

CREDIT CARD MAIL ORDER AND EXPORT HOTLINE

☎ 0202 813176

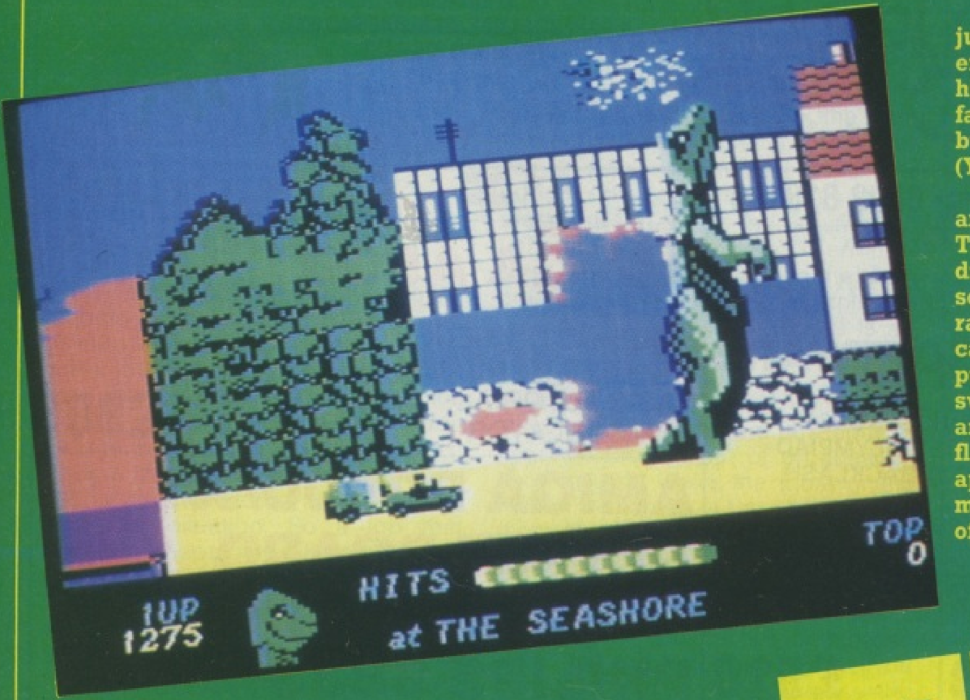
OPEN MON-SAT 9am-5.30pm

All prices and manufacturers specifications subject to change without notice, please call before ordering

To: First Micro, 6 Forest Close, Ebblake Ind Est, Verwood, Dors
I wish to order____________________

My computer is____________________
I enclose cheque/PO for £__________ **Excluding VAT**
or charge my Access/Visa No: **Exp. date**________
☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
Name____________________
Signature____________________
Address____________________

Postcode__________ **Tel No.**__________



The Mun

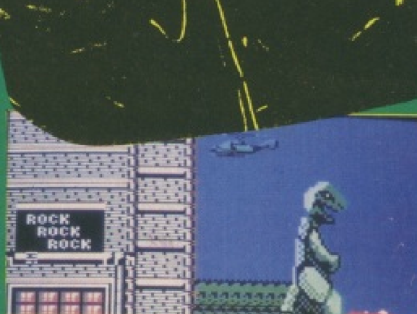
GREMLIN

The Muncher, that fifty foot tall dinosaur from the Chewits ad, has managed to chomp his way into a computer game. As you might expect, the result is not far from the original monster-mayhem coin-op Rampage.

A bunch of Japanese explorers have dug up a batch of dino eggs and taken them back home, assuming the species was extinct. In fact, these giant reptiles are still around, but keep a very low profile. That was until now. An angry dinosaur can be a lot of trouble, as Japan is about to discover.

You play the beast on his quest for the missing eggs. No-one stands in the way of The Muncher, apart from a few suicidal solidiers with popguns. (Would you put up your fist to a fifty foot pink dinosaur? You would?) Obviously a relative of Godzilla, you emerge from the primeval slime of the deepest oceans to begin your day of destruction. A few hysterial beach-goers make for a tasty breakfast. Alternatively, you could let them have it with a blow from your tail, or just jump! The army turn up soon enough, but are nothing more than a hindrance in the opening stages. In fact, the first level can be completed by simply walking to the end of it. (You've got big feet!).

The next level loads in briskly and the city's defence is stepped up. Tanks open fire and helicopters drop sticks of dynamite while the soldiers take shots at you from close range. In true King Kong style you can climb up the side of a building, punch and kick in the windows, and swipe out at the choppers buzzing around your head. Tempers are flared further still by the occasional appearance of a second prehistoric monster which acts as a kind of end of level guardian.

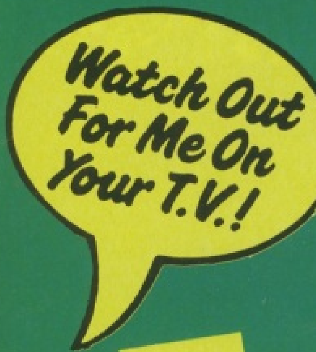


Clearly a good deal of thought has gone into the make-up of the main character. The range of moves is far greater than those found in Rampage, and while The Muncher is primarily a raging beast, he does have a cute side which shows through as he cups his hands in anticipation of a tasty passer-by. His stomping is complemented by some good sounds, unfortunately overshadowed by some more prominent crude effects. Some nice ideas have been added to the basic formula, such as the fuel trucks

soon
han a
es. In
leted
of it.

riskly
ed up.
pters
e the
close
e you
ding,
s, and
zzing
are
ional
storic
f end

1UP
3325
HITS
at THE SEASHORE


Watch Out For Me On Your T.V.!

We should be so smart ...

Dinosaur, literally translated means 'fearfully great lizard', and is the name given to the family of the largest animals ever to walk the Earth. The biggest of the predatory dinosaurs was the Tyrannosaurus rex, measuring over 18 feet tall and 35 feet long. The most brainless was the Stegosaurus, a 30 foot long animal whose brain was the size of a walnut, accounting for only 0.004% of its entire body weight. The story is that they disappeared because they lacked intelligence but they lasted 60 million years — thirty times the period that man has existed. Perhaps they weren't as stupid and at least they left us the ozone layer undamaged.

cher

which need to be eaten to keep your firey breath topped up, but as in Rampage, the novelty wears off all too quickly.

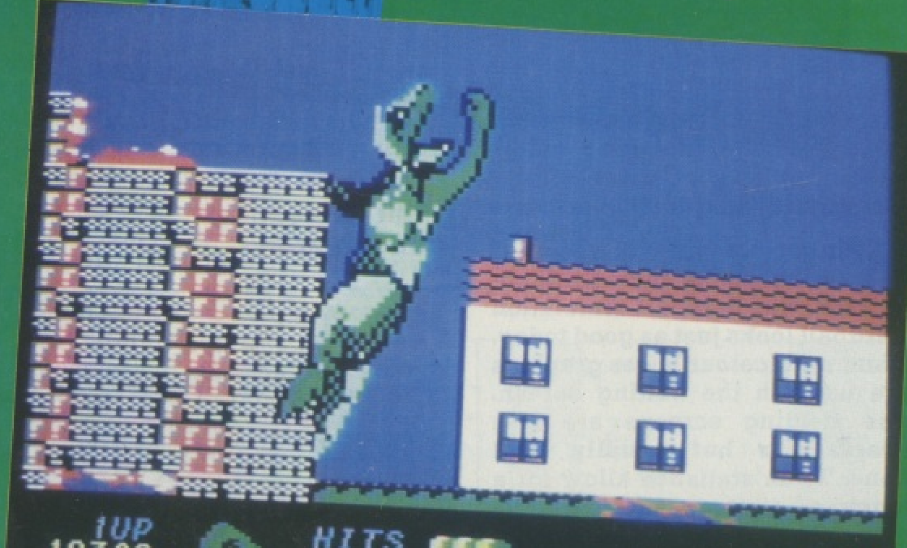
Look beyond the bland, somewhat blocky graphics and the hopeless options screen, and there is a lot of fun to be had. Whether you will be playing it next week is another matter, which puts its value for money into question. But the size of The Muncher is something to be seen. We're all becoming a bit flasé from looking at dazzling Amiga graphics. Not so long ago The Muncher would have been a huge sensation on the 64. And even now, if you haven't been spoilt by the 16 Bit wave, you'll probably have a good time with it. Check it out.

B.V.

t has
main
is far
Ram-
er is
does
hows
ls in
r-by.
d by
ately
pro-
nice
basic
ucks

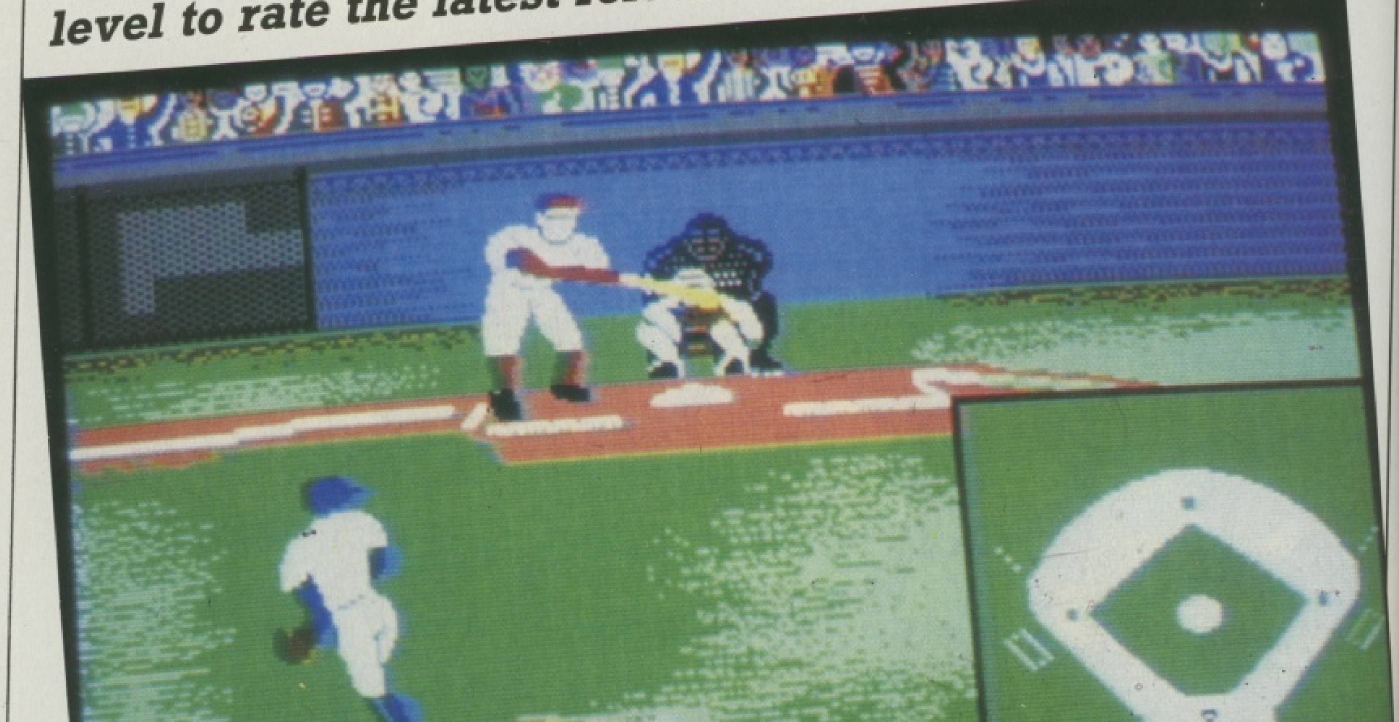
Graphics: 53%
Sound: 65%
Playability: 60%
Overall: 58%

Price: £9.99 (c)
£14.99 (d)



Bargain Bucket

Tony ('£1.99 is £1.99 too much') Horgan gets down to pocket money level to rate the latest releases

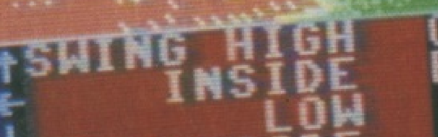


Hardball (Kixx)

Winner of an "Awesome" rating on its initial release in 1986, the baseball simulation Hardball looks just as good today. Giant multicolour hi-res graphics are used in the batting screen. The fielding screens are less spectacular but equally well done. Team statistics allow for a touch of strategy, although the game can get along fine without any manipulation of the line-up. Definitely not one to miss.
Rating: 9

Ninja Masacre (Codemasters)

A parody of the state of budget software you might think, or is it just what the punters want? Ninja games are usually a clone of one game or another, and in this case that game is Gauntlet. Monochome sprites and similar Spectrum-emulation in the sound effects are not the things great games are made off. I could pick holes in the spelling mistakes on the score panel ("strenght" but that would be petty (And people who live in glasshouses ...). What counts is the gameplay, which by now is not so much a familiar idea as a recurrent nightmare.



Rating: 3

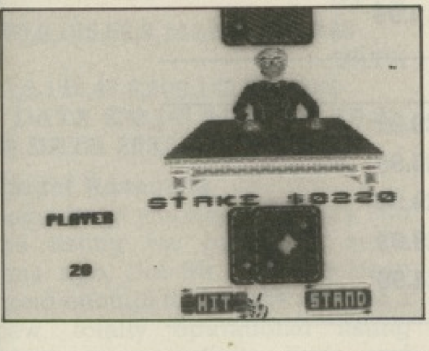
Bargain Bucket

Las Vegas Casino (Zeppelin)

Four ways to lose a lot of money have been included in Zeppelin's single-load compilation: blackjack, craps, baccaret and roulette. Zeppelin's usual standard of glossy in-game presentation fronts them all, together with a typical cheapo soundtrack.

Computerised card games are unavoidably plain. Blackjack and baccaret are spruced up with an animated dealer. The roulette uses an over-complicated system for placing bets, and the wheel is numberless. After you have watched the ball roll around the blank wheel the computer tells you where it ended up. Craps shows just how little fun can be had with a couple of dice.

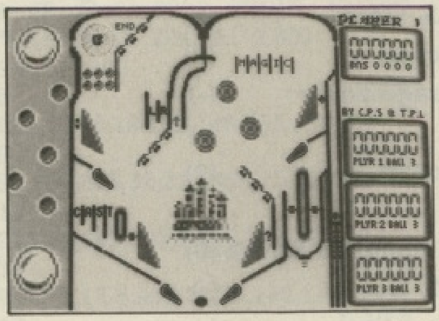
Rating: 5



Advanced Pinball Simulator (Codemasters)

One very conformist table is not what I would call "advanced", but then I am not Codemasters (But then who is?). All the familiar features are there, but little else besides. Like most pinball simulations, the game tends to follow a predicatable pattern. The table design is unadventurous, emphasising the repetitive ball movement. On the good side, it does have a realistic feel, and for that it is worth a look for pinball addicts.

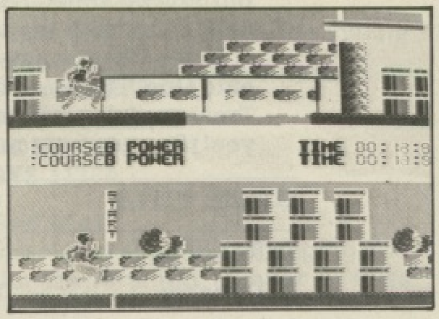
Rating: 6



Para Assault Course (Zeppelin)

It may be a blatant clone of Combat School's assault course, but it is a good blatant clone. There are four knee-grazing courses to test your stiff upper-lip (Don't you kneel on your lip?) which can be attempted at one of three skill levels. Each is a combination of walls, water jumps, logs, ramps, and the death-slide. You can preview any course and practice a succession of a particular obstacle. A split-screen two player mode has also been included. Graphics are very much in the style of Ocean's Combat School conversion, with similarly detailed sprites. Just a simple joystick waggler at heart, but not bad for the price.

Rating: 7

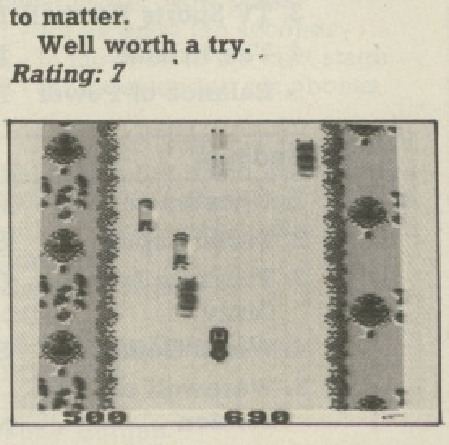


Spy Hunter (Kixx)

Spy Hunter looks and sounds every bit its age (practically senile), but strangely I still quite like it. It takes the form of a vertically scrolling shoot 'em up with a generous scoop of reckless driving thrown in. Most of the game is spent in your armed sports car, blowing enemy cars off the road, ejecting oil slicks and smoke screens, whilst avoiding the civilian traffic. Graphics and sound are very plain, except for the occasion tune. There is nothing much to aim for apart from score, but that does not seem to matter.

Well worth a try.

Rating: 7



Charts

Chart Chattering Events

For the 40th – sorry – 4th month in a row the half man/half cop stalks the mean streets of computer gamesland slaughtering the opposition and holding on to the proud Number One Spot. Even Ocean must be getting bored with dragging all that cash to the bank. Especially as their compilation In Crowd is edging up to Number Three. The bank manager will be annoyed again with the work they're giving him ... U.S. Gold's Denaris hoists itself up a place to Number Two (USG's swoon-worthy Danielle says it's absolutely great, so of course it must be!)

There are four new entries with the top honours going to Imageworks' Blasteroids which comes blasting in at Four. Real Ghostbusters (Tony Horgan doesn't like it but apparently you lot out there do) looks like a real challenger for that coveted Top Spot sliming in at Five. Gremlin, out of the Charts for too long, have new entry with Butcher Hill – a must for the growing number of vegetarians among you.

On the Amiga front, there is a straight-in-at-the-Number-One biggie, E.A.'s fantastic Populous. Seems that scads of you want to play God (Don't we all?) Rumours are that Electronic Arts have already sold 30,000 of this heavenly game and its only been out about five minutes! Sword of Sodan goes up and down like a yo-yo and climbs a place this month. While Mindscape who introduced Defender of the Crown to the U.K. way back when, have the other new entry with the world-renowned Balance of Power.

In the Cheapo list, Ghostbusters climbs on the Real G's bandwagon and holds onto One. There are though two newies: Turbo Esprit and the appallingly named Treasure Island Dizzy (and we'd rather not find out what that one's about, thank you!) See you next month – if I can get Stormlord off my screeen, that is!

Z.M.S

GAME TITLE	COMPANY	LAST MONTH	PRICE	RATING
1. Robocop	Ocean	(1)	£9.95	Mega
2. Denaris	U.S. Gold	(3)	£9.95	Mega
3. In Crowd	Ocean	(9)	£9.95	T.B.A.
4. Blasteroids	Imageworks	(-)	£9.99	Crisp
5. Real Ghostbusters		(-)	9.99	Crisp
6. Dragon Ninja	Ocean	(2)	£9.95	Mega
7. War in the Middle Earth	Melbourne House	(6)	£14.95	Mega
8. Arcade Muscle	U.S. Gold	(-)	£12.99	T.B.A.
9. Butcher Hill	Gremlin	(-)	£9.05	T.B.A.
10. Microprose Soccor	Microprose	(7)	£14.95	Mega
Amiga				
1. Populous	Electronic Arts	(-)	£29.99	
2. Sword of Sodan	Discovery	(3)	£24.95	
3. TV Sports Football	Mirrorsoft	(1)	£29.99	
4. The Kristal	Prism	(2)	£29.99	
5. Balance of Power	Mindscape	(-)	£24.99	
Budgets				
1. Ghostbusters	Mastertronic	(1)		
2. Turbo Esprit	Encore	(-)		
3. Treasure Island Dizzy	Codemasters	(-)		
4. World Games	Epyx	(-)		
5. Werewolf of London	Mastertronic	(3)		

HORGAN'S HINTS

I had hoped to include a map of Hewson's graphic extravaganza Stormlord this month. Unfortunately we only just had time to squeeze the review in this issue, so the you can look forward to the map next month.

Thunderblade

From R.V.D. Slot of Holland, this routine gives disk users infinite lives. Load the game and reset on the hi-score screen. Now type:

```
POKE 44,32:POKE 8192,0:NEW
(RETURN)
```

With that done, enter the following listing. If you wondered just how it works, it places the hex value $EE in memory location $2000 in part one, $1ECB in part two, $1EED in part three and $1DDC in the final section.

```
1 FOR X=2052 TO 2107:READ Y:POKE X,Y:A=A+Y
2 NEXT X
3 IF A<>4851 THEN PRINT "ERROR IN DATA":END
4 SYS 2052
5 DATA 169,17,141,196,12,169,8,141,197,12
6 DATA 76,0,11,172,51,8,192,8,208,2
7 DATA 160,0,185,52,8,141,46,8,200,185
8 DATA 52,8,141,47,8,200,140,51,8,169
9 DATA 238,141,0,0,76,0,16,0,0,32
10 DATA 203,30,237,30,220,29
```

Target Renegade

Some bugs wormed their way into the listing we published some time ago, but Mr Slot has been good enough to provide me with a new, totally operational listing which gives infinite lives and stops the clock. Enter it before loading the game.

```
1 FOR X=2592 TO 2626:READ Y:POKE X,Y:A=A+Y
2 NEXT X
3 IF A<>3875 THEN PRINT "ERROR IN DATA":END
4 SYS 2592
5 DATA 32,44,247,160,17,185,49,10,153,74
6 DATA 3,136,208,247,56,76,108,254,169,0
7 DATA 141,133,135,96,72,152,72,32,75,3
8 DATA 169,173,141,121,141
```

Automania

Observant readers will have noticed from the REM statements that the following pokes come from Andrew Thomas. Enter this before loading the game for infinite lives.

```
0 REM HACKED BY ANDREW THOMAS
3 FOR A=3000 TO 3049:READ B:POKE A,B:C=C+B:NEXT
4 IF C<>6391 THEN PRINT "ERROR IN DATA!":END
6 SYS 3000
8 DATA 169,1,170,168,32,186,255,169,0
9 DATA 32,189,255,32,213,255,162,0,189
10 DATA 216,11,157,163,8,232,224,18,208
11 DATA 245,76,13,8,96,169,76,141,137
12 DATA 87,169,145,141,138,87,169,87
13 DATA 141,139,87,76,241,9
```

Nite Rider

Enter the following and load the game with infinite lives.

```
0 REM HACKED BY ANDREW THOMAS
3 FOR Z=673 TO 699:READ X:POKE Z,X:C=C+X:NEXT:PRINT CHR$(147)
7 IF C<>3616 THEN PRINT "ERROR IN DATA!":END
8 PRINT "HACK ACTIVATED"
9 PRINT:PRINT "NOW LOAD GAME NORMALLY"
10 DATA 120,169,2,141,21,3,169,174,141
20 DATA 20,3,88,96,169,234,141,221,206
30 DATA 141,222,206,141,223,206,76,49,234
31 SYS 673
```

Hektik

Reset the game and enter the following for infinite lives:

```
POKE 23392,76
POKE 23393,101
POKE 23394,91
SYS 22177
```

Magic Carpet

Reset and enter these for infinite lives:

```
POKE 52957,234
POKE 52958,234
POKE 52959,234
SYS 11770
```

Red Max

Reset and enter this, changing X to the the required number of lives (1-255):

```
POKE 5224,X
SYS 2064
```

I Ball 2

Reset and enter the pokes for infinite lives:

```
POKE 38861,76
POKE 38862,210
POKE 38863,151
SYS 4050
```

AMIGA

Outrun

At last, here's that cheat I promised a few months ago! Start the game and forget about driving the car. Type in RED BARCHETTA including the space, to enter the cheat mode. Now press:

T - for an extra ten seconds
S - to move on to the next stage
B - for an extended play bonus

That's all from me this month, but remember, fame and freebies await the suppliers of the best pokes and maps. Here's the address:

Horgan's Hints
CCI
40 Bowling Green Lane
LONDON
EC1R ONE
Tony Horgan.

OPINION

JOHN COOK

John Cook is a journalist who has also worked as a computer product manager and games designer.

Converting coin-ops onto home formats is starting to get, well, shall we say, tricky — even when writing for the 16-Bit machines. Nowadays, when programmers go into arcades, instead of the rustle of notebooks and pens there's slap of the hand against forehead and the clunk of jaws hitting floors — take Metal Hawk as the perfect example.

Realtime expansion, compression and (wait for it) rotation of a screen made up of many, many sprites, fast. Anyone that can do that on an A500 could name their price to any game company — trouble is, no-one can. No, Sir, not even you!

The problem is easy to define — the game boards of almost every coin-op are getting bigger and more sophisticated ... while 8 and 16 Bit computers aren't. It's that simple.

The major headaches occur when it comes to sprite games — take for example perhaps the two most hand-over-the-mouth-muffled-giggle jobs of recent times, Outrun and Afterburner.

Play the coin-op ... then play the conversion. Near is not the word, but there again neither is close, proximal, thereabouts or resemblance. Before we get too clever "though, how can you expect a humble 64K or even an 512K and a single 68000 to complete with a stand-alone coin-op with a world allocation of silicon on-board? The answer is that you can't — as Arcade has found out to its cost.

Remember a few years back when Mastertronic announced the launch of the Arcadia coin-op label. the theory was flawless. Take an Amiga with a few add-on bits. Put it inside a video cabinet. Write arcade quality games. Flog them to the arcade owners — with the added advantage of being able to change games by simply buying a new disk instead of a whole new board. Wait for the money to come rolling in — then make a second mega-killing by releasing a mildly cut-down (but essentially the same) version on home format. A kind of DIT coin-up licence.

What Mastertronic failed to realise was the pace of change within the industry. With the coin-up business possibly worth more in revenue terms than the movie business in the USA, was the technology used to produce the games likely to stay still?

Who really knows how Arcadia has done in pure financial terms, but the fact that the chances of you finding an Arcadia machine in a UK arcade are as remote as Jason from Neighbours walking and chewing gum at the same time indicates something. And if a sensible company dedicated to producing coin-op games on the Amiga can't originate state-of-the-art product on the thing — how can you expect convertors to cope?

At this point, enter the 16 Bit games consoles. These are the babies that can deliver when it comes to arcade conversions — as anyone who has played R-Type on the PC-Engine will tell you. Can you imagine what's going to happen in two years time when it's retailing at £299 with a CD Rom Drive?

The 16 Bit Sega console can do some very impressive stuff — and good reports are heard of the 16 Bit Nintendo. The simple fact is that the dedicated consoles can product results that the 16-bit computers can't — because all they are designed to do is play games. Period. In that sense, they are a sterile media.

Your computer has been designed to be flexible and allow you to do any number of things with it: graphics, music, programming, productivity. Games are only an ancilliary concern.

What I'm saying is make the most of that versatility — because if you bought it as a games machine only and don't learn to get the most out of your machine, it'll have been your cash down the tubes. Because the consoles are coming. And that means the writing is on the wall for the computer as The Ultimate Games Machine.

The Dral Speaks

CCI: Are Compunet continuing to encourage new users amongst C64/128 owners?

Dral: *Yes, a very definite Yes.*

CCI: Are facilities likely to be added to Compunet that are accessible to Amiga owners but not to those using the C64/128?

Dral: *It's bound to happen. But Compunet is famous for it's user input. We don't have a massive staff of coders.*

continued from page 48

Most new facilities over the years have come from users. So, as more and more Amiga users join us, more and more facilities for those users will appear.

Like the 64, the terminal software for the Amiga is being redeveloped at the moment.

CCI: What percentage of users log in with C64/128s? How does this compare with the figures for the Amiga and ST?

Dral: *The vast majority of users are C64/128 owners. The Amiga percentage is growing fast, the ST not quite so fast.*

CCI: The Compunet host machine is in the process of being upgraded. Could you tell us a little about the upgrade?

Dral: *The upgrade has meant a vast jump in memory and storage space. We've jumped well out of the megabyte league and way into the gigabyte league (something like four times the original amount of storage).*

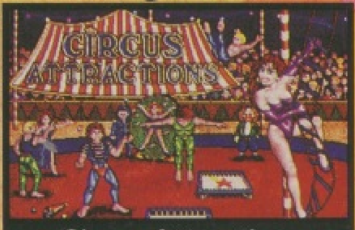
This means there's lots of room for new uploads, new facilities, new users and even new computers not previously able to access Compunet. All in all the future looks good. I'm excited to have joined the Compunet team at a time when we're growing after a short period of stagnation.

J.L.

GOLDEN GOBLINS®

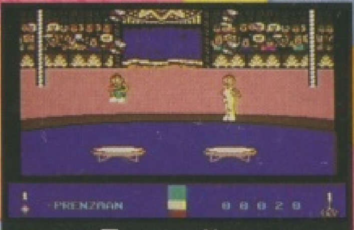
CIRCUS ATTRACTIONS

Amiga screen



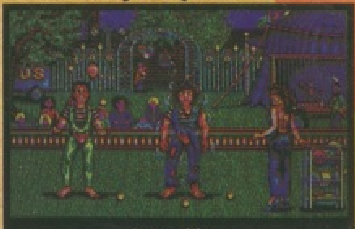
Circus Attractions

C64 Screen



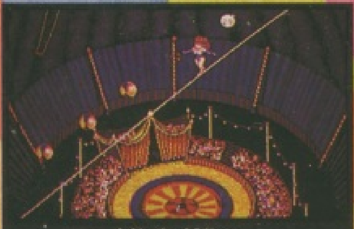
Trampoline

PC (EGA) screen



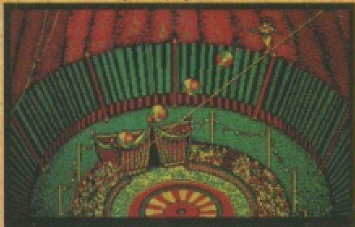
Juggling

Atari Screen



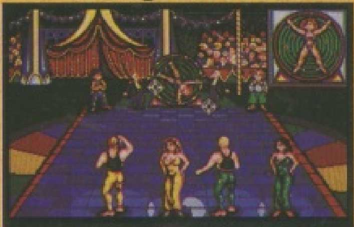
High Wire

PC (CGA) screen



High Wire

Amiga Screen



Knife Throwing

AVAILABLE FOR AMIGA, ATARI ST, CBM 64
and IBM PC & COMPATIBLES

Amiga	£19.99
Atari ST	£19.99
IBM PC	£19.99
CBM 64 Cass	£9.99
CBM 64 Disk	£12.99

Rainbow Arts, 65 Sketty Close, Brackmills Business Park, Northampton NN4 0PL

MEGALAND 0703 332225

Specialists in Mail Order

WHY MEGALAND • 24 Hour Delivery • 12 months warranty on all hardware
• On site maintenance optional • Technical support
• 24 Hour ordering service • Special price offers
• MEGASOFT Club membership for extra special OFFERS

MEGA
SUPER
OFFER
PCI
EXPANSION BOX
£99 + VAT
00000000

SPECIAL OFFER

PCI COMPUTER + HIGH RES MONITER ONLY £309 INC VAT

MEGA
SUPER
OFFER
TIME
WORKS FOR
D.T.P.
£89 INC VAT
00000000

NOW IN STOCK
AMIGA A500 AIR MILE PACK" AMIGA COMPUTER,TV MOD NEBULAS,SPITZ PAINT ROGER RABBIT ,STAR RAY +500 AIR MILES 499 inc.
WHEN YOU BUY A AIR MILES PACK FROM MEGALAND WE WILL GIVE YOU £25 OFF YOUR NEXT PURCHASE OR £25 TOWARDS YOUR HOLIDAY

AMSTRAD PC 2086

PC2086 SD12 MD	£619 inc
PC2086 SD 14 CD	£775 inc
PC 2086 12 HRCD	£875 inc
PC 2086 SD 14 HRCD	£975 inc
PC 2086 DD 12 MD	£775 inc
PC 2086 DD 14 CD	£925 inc
PC 2086 DD 12 HRDC	£1025 inc
PC 2086 DD 14 HRCD	£1125 inc
PC 2086 HD 12 MD	£1025 inc
PC 2086 HD 14 CD	£1175 inc
PC 2086 12 HRCD	£1285 inc
PC 2086 14 HRDC	£1395 inc

AMSTRAD PCW

PCW 8256	£389 inc
PCW 8512	£465 inc
PCW 9512	£515 inc

AMSTRAD PPC PORTABLES

PPC 512S	£415 inc
PPC 640S	£515 inc
PPC 512D	£565 inc
PPC 640D	£720 inc

AMSTRAD PC1512

PC1512 SD M/M	£415 inc
PC1512 DD M/M	£515 inc
PC1512 SD C/M	£515 inc
PC1512 DD C/M	£615 inc

AMSTRAD PC1640

PC1640 SD ECD	£720 inc
PC1640 DD ECD	£825 inc
PC1640 HD20 ECD	£1025 inc
PC1640 SD C/D	£619 inc
PC1640 DD C/D	£720 inc
PC1640 HD20 C/D	£925 inc
PC1640 Sd M/D	£515 inc
PC1640 DD M/D	£619 inc
PC1640 HD20 M/D	£825 inc

COMMODORE PRICE REDUCTIONS

FULLY COMPTABILE SINGLE DRIVE PC COMMODORE PC1 £269 + VAT
(includes mono monitor and able-1 integrated software)
AS ABOVE BUT WITH 14 in C.G.A. COLOUR MONITOR £369 + VAT

COMMODORE DESK TOP PCS

ALL XT'S AT 3 SPEEDS 4,77,8,10 Mz supplied with AT-E 102 keyboards & Dos

PC 10 111 Single drive mono monitor	£485 + VAT
Single drive C.G.A. colour monitor	£599 + VAT
Single drive E.G.A. colour monitor	£799 + VAT
PC10 111 Dual drive mono monitor	
Dual drive C.G.A. monitor	£659 + VAY
Dual drive E.G.A. monitor	£789 + VAT
PC20 111 20 MB Hard disk mono monitor	£689 + VAT
20MB Hard disk C.G.A. monitor	£839 + VAT
20MB Hard disk E.G.A. monitor	£949 + VAT

COMMODORE PC40 AT's

Include V.G.A. Adaptor, 1MB RAM 1.2 MB Drive

PC40 111 Sngle drive V.G.A. mono	£1149 + VAT
PC40 111 Single drive V.G.A. colour monitor	£1369 + VAT
PC40 111 40 MB Hard disk V.G.A. mono	£1419 + VAT
PC40 111 40 MB Hard disk V.G.A. Colour monitor	£1579 + VAT
PC40 111 40 MB Hard disk & 40 MB Tape streamer mono	£1629 + VAT
PC40 111 40MB Hard disk & 40 MB Tape colour monitor	£1839 + VAT

COMMODORE PC 60 s 386 DESK TOP

TOP Standard V.G.A. Adaptor 16MZ

PC60 512K RAM 80386 MONO	£1029 + VAT
PC60 512K RAM 80386 C.G.A. COLOUR	£1159 + VAT
PC60 512K RAM 80386 E.G>A. COLOUR	£1199 + VAT
PC60 2.5 MB RAM 80386 MONO	£1649 + VAT
PC60 2.5 MB RAM 80386 C.G.A. COLOUR	£1779 + VAT
PC60 2.5 MB RAM 80386 E.G.A. COLOUR	£1819 + VAT
PC60-40 40MB Hard disk 2.5 MB RAM 80386 MONO	£1939 + VAT
PC60-40 40 MB Hard disk 2.5 MB RAM C.G.A.	£2105 + VAT
PC60-40 MB Hard disk 2.5 MB RAM E.G.A.	£2149 + VAT
AS ABOVE WITH 40 MB TAPE STREAMER	
Mono Monitor	£2229 + VAT
C.G.A. Monitor	£2395 + VAT
E.G.A. Monitor	£2439 + VAT
PC60-80 80MB Hard disk Mono monitor	£2105 + VAT
PC60-80 80MB Hard disk mono monitor	£2269 + VAT
PC60-80 80MB Hard disk E.G.A.	£2319 + VAT
AS ABOVE WITH 40 MB TAPE STREAMER	
Mono monitor	£2394 + VAT
C.G.A. monitor	£2559 + VAT
E.G.A. monitor	£2599 + VAT

ACCOUNTS S WARE

Sage Bookeeper	£99
Sage Accountant	£149
Sage Acountant Plus	£249
Sage Financial Controller	£399
Sage Payroll 2	£149
Migent Accountability	£79

SPREADSHEETS

Amstrad Supercalc 3.2.1.	£62
Ashton Tate Javelin Plus	£245
Borland Quattro	£199
Grafox Logistix	£79
Lotus 1-2-3 Ver 2.01	£395
Lotus Hal	£120
Lotus Report Writer	£79
Microsoft Excel	£395
Microsoft Multiplan Jnr	£56
Sage PC Planner	£99
Supercalc Ver 5	£396
VP Planner	£66
VP Planner	£110

ATARI

520 STFM Super Pack	£295
520 STFM Explorer Pack	£225
520 STFM and Mono Monitor	£324
1040 STFM with TV Modulator	£339
1040 STFM with Mono Monitor	£438
1040 STFM with Super Pack software	£399
1040 STFM with VIP Professional and Microsoft Write	£379
Microsoft Write and Super Pack Software	£449

PLEASE NOTE SUPER PACK SOFTWARE INCLUDES OVER £450 WORTH OF GAMES AND ACCESSORIES.

42 - 44 MILLBROOK ROAD EAST, SOUTHAMPTON
OPEN MONDAY TO SATURDAY 9.00am to 5.30pm

MEGALAND

CREDIT CARD MAIL ORDER

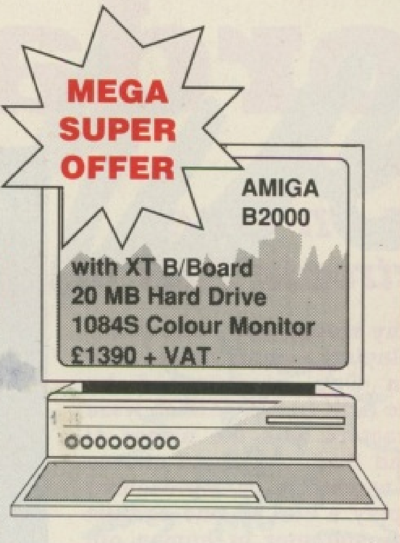
0703 332225

VISA

AMIGA 500 MEGA PACK £399 INC

INCLUDING MOUSE WORKBENCH 1.3, UTILITIES, MANUALS, BASIC TUTORIAL, PLUS FREE TV MODULATOR, JOYSTICK AND ANY TEN FREE GAMES FROM OUR SELECTION BELOW

Custodian, Warlocks Quest, Spitting Image, Int Soccer, Winter Olympiad 88, Hellbent, Backlash, Zynaps, Return of the Jedi, Eliminator, Demolition, Gridstart, Mercenary Quadralien, Star Goose, Powerplay, Hostages, Platoon, Wizball



MEGA SUPER OFFER

AMIGA B2000

with XT B/Board
20 MB Hard Drive
1084S Colour Monitor
£1390 + VAT

AMIGA HARDWARE

500 + TV MOD	£369 inc
500 MEGAPACK see above	£399 inc
500 + 1084S HIGH RES COLOUR MONITOR	£578 inc
500 + VISIONS 4200 COLOUR MONITOR	£528 inc
500 + 8833 PHILIPS COLOUR MONITOR	£548 inc

AMIGA EXTERNAL DRIVES

F880 3 1/2 DRIVE	£89 inc
F302C 3 1/2 DRIVE	£85 inc
UMANA CAX 354E	£99 inc
1010 3 1/2 DRIVE	£115 inc
MD C30 3 1/2 DRIVE	£85 inc

AMIGA ACCESSORIES

501-512 KRAM	£129 inc
OUSE MAT	£4.95 inc
MIGA DUST COVER	£4.95 inc
MODULATOR	£21.95 inc
TEEL MONITOR STANDARD AMIGA 5205T	£15.95 inc
TEEL DOUBLE MONITOR STAND AMIGA ST	£25.95 inc

COMMODORE C64

4 Hollywood Pack	£149 inc
4 Home Entertainment Pack	£199 inc
41 C11 51/4 C64 drive	£145 inc
81 31/2/800K C64 drive	£129 inc
ceanic 41/4 C64 drive	£125 inc

A500/A2000 MONITORS

lips CM8833 High Res	£229 inc
84(s) Stereo High Res	£239 inc
01-Colour Pcor C64	£149 inc
00 C64 Mono	£129 inc
IONS 4200	£189 inc

A2000 HARDWARE

A2000 + IBM	£899 + VAT
A2000 + 1084(5) Monitor + bridge BD + 20Mmb Hard disk	£1598 inc
A2000 + 1084(5)	£1199 inc

FOR DTP/CAD CONFIGURATIONS
ALL SYSTEMS FORMATTED
AMIGA 2000 A 2058 8MB Mem Expansion Card fitted with 2MB RAM
A2094A/2092 - Autoboot AMIGA 20MB Hard drive internal (AMIGA)
Video Card - Flicker Fixer Phone
14 Inch High Res Colour Monitor FST
A2000, A2620, A2090A/2092
Video card 21" FST HRCM Phone
A2000, A2620, A2090A/2094 A2058
Video Card 14" HRCM Phone

FOR FURTHER SELECTION PLEASE PHONE

A2000 ACCESSORIES

20MB Hard disk AMIGA or MSDOS	£399 inc
XT Bridge board	£399 + VAT
AT Bridge board	£675 + VAT
INT Genlock	£179 + VAT
8 MB RAM/B with 2 MB RAM	£649 + VAT
2nd Drive 31/2	£75 + VAT

DRIVES

Triangle 20MB Hard disk	£469 + VAT
VORTEX A500 Hard disk	£499 + VAT
Triangle 40MB Hard disk	£579 + VAT
Cumania CSA 354	£99 inc
Cumana CDA 358	£199 + VAT
Cumana IMB 51/4	£115 + VAT
External 2nd drives from	£85 inc

PRINTERS

STAR LC10 MONO	£190 inc
STAR LC10 COLOUR	£249 inc
START LC24-10 24 PIN	£349 inc
STAR NB24-10	£599 inc
STAR LC10 CMB C64	£179 inc
STAR LC10 CMB C64	£299 inc
EPSON LX800	£149 + VAT
EPSON LQ500	£305 inc
EPSON FX850	£286 inc
EPSON EX800	£427 inc
EPSON EX1000	£482 inc
PANASONIC KXP 1124 (24 Pin)	£299 inc
PANASONIC KXP 1081	£169 inc

COLOUR PRINTERS

Citizen HQP40 24 Pin	£575
LC10 Colour 9 Pin	£249 inc
EPSON EX1000	£543 inc
Hewlett Packard Paint Jet	£689 inc

LASER PRINTERS

Citizen Overture	£1299 inc
Hp Laserjet 2	£2099 inc
Star Lazer 1MB MEM	£1695 inc
EPSON CP3500	CALL

MONITORS

CBM 1084S Stero	£239 inc
CBM 1901 special price	£149 inc
CBM CGA Compatible	
Phillips 8833	£229 inc
CBM 1900 Mono	£129 inc
ATARI 124 Mono	£129 inc
ATARI SC/1224	£259 inc

SPECIAL OFFER

Amiga A500 1.3 WB
1084(s) Colour Monitor
£578 inc VAT

MEGA SUPER OFFER

AMIGA A500 1.3

Monitor 1084 S
RAM Expansion
£699 inc

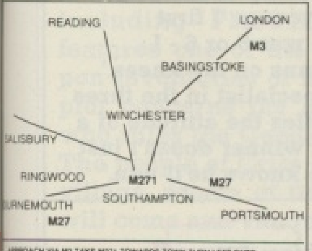
SPECIAL OFFERS

EPSON LQ500
24 PIN PRINTER
£305 inc VAT

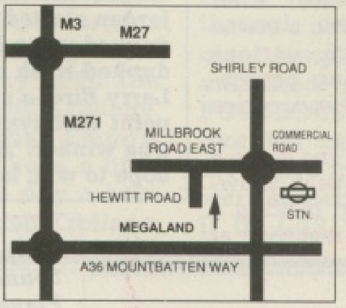
WESTERN DIGITAL
HARD CARD 32MB
£258.85 inc VAT

MEGALAND

CREDIT CARD MAIL ORDER
SPECIAL HOTLINE FOR EXPORT
TEL 0702 332225
ALL OTHERS SUBJECT TO AVAILABILITY
OFFERS SUBJECT TO CHANGE IN PRICE
WITHOUT NOTICE



PPROACH VIA M3.TAKE M271 TOWARDS TOWN.TURN LEFT ONTO OUNTBATTEN WAY.BEFORE STATION TURN LEFT TOWARDS SHIRLEY FTER 50 YARDS LEFT INTO MILLBROOK ROAD EAST. MEGALAND IS 30 Yds ON THE LEFT. 3 mins WALK FROM STATION



ALL PRICES INCLUDE VAT UNLESS STATED

To: 42-44 Millbrook Road East, Southampton

I wish to order ______

I enclose cheque/PO for £ ______ inc VAT.

Or charge my Access/Visa No. ______ Exp. date ______

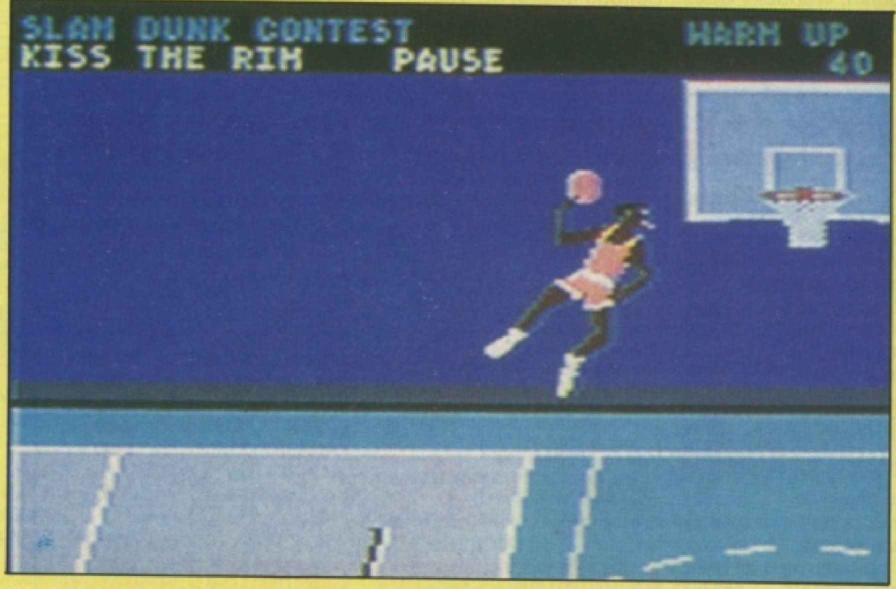
Name ______ Signature ______

Address ______

Postcode ______ Tel No: ______

PRICES CORRECT ON DATE GOING TO PRESS

Jordan vs Bird



One on One
Electronic Arts

Many moons ago I remember playing a game called One on One, programmed by Electronic Arts. In this version were two characters with the names of Jordan and Bird, you could choose who you wanted to be represented by then play a one on one against either the computer or human opponent. EA's latest edition, Jordan vs Bird is based on the same idea but has far more options and has gone through a general face-lift.

Throughout the game there will never be more than two players on the court, therefore only one end of the gym is used. When playing a one on one game you will control either Jordan or Bird, the idea is to score as many points as possible against your opponent in the given time limit (you can choose how long you want for each quater). Or you can play without a time limit, the winner being the first to score 11 or if selected, 15.

The computer opponent has varying levels of difficulty to suit your ability, the easiest level starting with Recreational then Varsity (whatever that may mean) to College and finally Pro. The control system is quite straightforward, simply push the joystick in the direction you want to run. To take a shot at the basket press the button then take it off at the right moment to release the ball. Different moves can be made in accordance to your position at the basket. Other shots such as the dunk shot can be made if you push up on the joystick a moment before you jump.

The slam dunk contest and 3-point shoot out are separate from the one on one event and give the game a bit more variety and humour than it had in the original. I say humour because the slam dunk contest has some of the most amusing animation I have seen. You can pick a total of three dunk shots out of ten. The varying dunk shots all have different names such as the Air Jordan or Two Hand Hammer or my favorite Kiss the Rim. If you choose to play a one player game the computer will go first to show how it should be done. After an attempted dunk shot five judges will appear on the screen and each give you a mark out of ten.

Up to four players can compete in both the slam dunk contest and the 3-point shoot out. In the 3-point shoot out you are given sixty seconds to score as many 3-point baskets as possible. The balls are laid out in 'bins', (similar to benches) with five in each. Every time you get a successful shot you are awarded one point, apart from the last ball in each bin which is worth two (the max. score being thirty).

All events have warm up options which enable you to do just that if you want to practice. When playing a one on one game there are various rules to be obeyed, or if your of a violent nature, (perish the thought!) you can select no rules at all. Some of the rules included are *Travelling*, if you jump in the air with the ball and land again without shooting you will be penalized, or if you have the ball and charge into the back of your opponent a foul will also occur.

Both players, Jordan and Bird have individual abilities and weaknesses. The computer knows these but you'll have to find out for yourself (unless you already know from watching them on T.V). After each quarter you are given a status screen which displays various things like your shooting percentage, amount of rebound recoveries and so on.

At the end of a one on one game a winning screen will appear showing either Jordan or Bird making a spectacular shot with a message at the bottom either in congratulations or comiserations depending on how well you did.

On first impressions I thought that One on One was a very basic and rather repetitive game, due to it only using two players and half a court, however after playing it for a couple of hours I realised that I found it a fun and enjoyable game.

The graphics don't look too impressive at first sight, but wait until you see the animation if you want a laugh. Unfortunately the sound is almost non-existent using only a couple of sound effects throughout the game.

Basketball is about the only sport that I don't normally like playing, but having played Jordan vs Bird (and the slam dunk contest) I quite fancy a game. Not a masterpiece, just good fun.

D.H.

Basketball is one of the top three sports in the U.S.A. and is growing in popularity in the U.K. and elsewhere.
Michael 'Air' Jordan, is renowned for his unrivalled slam dunking ability. Rookie of the Year in 1985, U.S. National Basketball Association 1987 top scorer, Air Jordan started young: 'I first dunked when I was 5 or 6 - I dunked trash cans on my knees.'. Larry Bird, a specialist in the three point shot, typifies the attitude of a true winner: 'A winner doesn't just hope to win; he knows he'll win.'

Graphics: 78%
Sound: 32%
Playability: 73%
Overall: 72%

Adventure

BY ANDY MOSS

JULY ADVENTURE COLUMN FROM ANDY MOSS

Welcome back to the most comprehensive adventure pages you'll find anywhere. This month sees reviews of some great new adventures that are soon to be released. How about a delayed GALDREGONS DOMAIN (due to unloadable software) a truly memorable home grown adventure called TIME THIEF and last but by no means least another Sierra game, MANHUNTER. But first, an adventure report on the European Computer Show held last month in London. The good thing about this particular show was that all the exhibitors had the same size stand, with no huge monolithic attention grabbers to take your mind off the one thing that we were there for... sizing up the new software. Activision had a video of a number of items including PROPHECY, which features one of the largest weapon inventories of any RPG. The plot concerns the evil Krellane, who rules the Gendorian Empire. The people of Criss Cross, a little village, dream of the day a hero will come and vanquish Krellane, so guess what, you are the answer to their dreams, albeit an unarmed one at the start. All the usual RPG effects are here along with some new features, such as a 'hands on' combat sequence, a creative spell system that lets you mix spells differently to achieve other effects, all of which are shown in animation, and 20 animated individually rendered monsters. Also on show was some early shots of Infocom's JOURNEY and SHOGUN both blockbusters I can tell you. Next stand along was Infogrames, and news here of a sequel to Murder on The Atlantic (remember?) called MURDER IN VENICE. No real deails yet except the only working copy is in French! Also on the drawing board is a strange one for a Gallic company, a recreation of the American Civil War entitled NORTH AND SOUTH. Alongside here was Electronic Arts, parading some newies from SSG such as GOLD OF THE AMERICAS a fame, fortune and exploration game, and FIRE KING where you have to battle through enchanted forests, ancient temples etc and face fully animated monsters of Chaos. POPULOUS of course was selling like hot cakes, what a winner they have in that one. Mindscape were showing tit bits of DEJA VU II IN LAS VEGAS the sequel to that fabbo one about you waking up in a strange building with a case of severe memory loss. Looking forward to seeing that one, I can tell you. On the Mirrorsoft stand, LORDS OF THE RISING SUN was prominent (review next month) , FTL the creators of Dungeon Master were unveiling their new release schedule, including CHAOS STRIKES BACK, the sequel to DM and a new adventure based in Space. This will be every bit as devious as DM we are informed with some outragously complex puzzles. Cinemaware have IT CAME FROM THE DESERT nearly complete, which is a send up of the old horror bug movies of the 1950's. It is set in the sleepy desert town of Lizard Breath in Arizona where a meteor crashes nearby. After that strange things begin to happen. You play a young scientist who investigates these disappearences and stumbles onto Giant Ants!! Look here for the first review.

A shorter news desk this month due to all that info at the Show this month.

NO DUNGEON MASTER FOR AMIGA 500

After many differing stories and much soul searching at FTL the absolute official and definitive decision on the 500 version of Dungoen Master is NO GO. FTL have reached this decision due to their policy of single disk one load only product. To compress

More Adventure!

the game into one load and on one disc would mean substantial changes in design, graphics and gameplay which would make the product inferior. If you hear anything to the contrary its clap trap. Andy Moss has spoken.

INTERCEPTOR HAVE ADVENTURES FOR SALE

Interceptor have informed me that they have a series of adventures, all packaged, printed and complete to sell as a product range to any sofware publisher who would like it. As Interceptor's labels are arcade only, adventures do not figure in their plans. Anybody interested please contact me.

ELECTRONIC ARTS IN BARGAIN BUY SALE

Electronic Arts have announced the release of SOFTWARE CLASSICS, an exciting new range featuring established award winning titles at a budget price. There are a number of adventures included in the deal like Bards Tale and Legacy Of The Ancients. For £3.00 you can't go wrong can you?

ADVENTURE MAILBAG

Dear Andy
At present I am playing BARDS TALE III and have completed the first task in Arboria. In certain places you need to answer a riddle to proceed further. I am certain that this is in the form of spell casting. I would be grateful for the spells required to gain access to the Towers
S Turbull Tyne and Wear

Wrong! The riddles solutions tend to be one or two word answers and not spells. Try finding a logical word to the clues given.
AM

Dear Andy
This is the first time I am writing to a magazine and I would be grateful if you would help me enter the castle in Kentilla and cross the sea in the boat with out drowning. I have just finished Heroes of the Lance, and think it is superlative. The only fault I could find is that that it is simply too small and easy to complete. If only it were more difficult and more complex. The end is disappointing, you just get Congratulations you have completed your quest'.
Here are some tips for it. All the gaps can be jumped using the magician. Save points by using 'heal light wounds' rather than any other heal spell. To kill the dragon get Flint the dwarf to run under his head then push the dragon against the wall. You will find the discs of Miskhail, pick them up and face the dragon. Now select Golmoon and cast the spiritual hammer spell. Press fire, and he will throw the staff at the dragon, killing it. I think your section is great, how about more space.
Klaus Conrad

The castle is entered in Kentilla by befriending the eagle who will carry you into it. The boat is kept afloat by the 'bale boat' command, usung the bucket. Thanks for your tips, and all your kind words.
AM

Dear Andy
Firstly congrats on such a briliant Adventure section, we keep up with it every month (even if it is a couple of months behind over here). Your news, reviews and monthly Bards Tale specials have helped us to no end. As hardened adventure fans and out of much appreciation for the fab work you do we bring you an exclusive CCI Mega tips special. It took many weeks before we worked our way around the bits and pieces, but we finally made it for our favourite adventure column. Best wishes
Robbie and Ed Noorday
Moree Australia

Thanks boys for your praise , a humble hack is much appreciative. Thanks also for some great tips which I have included a bit later on. It seems CCI is going down great down under what with The Gerkin and you guys, I only wish there were more Aussie software houses like SSG that we could feature.
AM

BARDS TALE SOLUTION PART FOUR.........

THE DARK DOMAIN LEVEL FOUR

Traps! The party has wandered through these deadly corridors and mazes for what seems to be an eternity. 1) Finally discovered a door that leads us into the other main section of the dungeon. But the entire area is blanketed by darkness. Andreas has decided to explore the area thoroughly, after all why would someone cast a darkness spell everywhere unless they had something to hide? 2) sure enough, he found a door that led to a square of magic regeneration. Later on we also found another teleport square that got us to a part of the dungeon inaccessible by any other means (4). 5) Going North we came to a deep chasm, where our winged companion offered to carry us across. North still further, and we came to a set of double doors, Andreas remembers a clue and plays Watchwood on his horn...... we pass through and find .... THE DARK LORD! After a tremendous battle we defeated him and his foul followers,(7) we walk on and find (8) a princess. Nearby was another teleport room (9) where we found ourselves next to the stairs (10). We exit the dungeons and return to the wizard. He casts a spell on us and thanks us. The review board increased our rank and spells, and bidding farewell to the winged creature, we departed for the wilderness.....TO BE CONTINUED NEXT MONTH

MEGA TIPS SPECIAL (courtesy of the Noordy brothers in Aussie)

QUESTRON 1

Map the dungeons very carefully, buy plenty of back up armour,buy an eagle, buy a couple of ropes and hooks,(for climbing up dungeons with no stairs!) How do you kill Mentor? What was the second use for Mesrons magic powder.

More Adventure!

continued from page 70

BARDS TALE 1
TO REPRODUCE ANY ITEM

What you need is a spare formatted disk with a copy of your character on it. Enter Garths shop and sell him your newly acquired magic item (this will now stay in his inventory). Insert your back up copy and buy the magic item. This will now be removed from Garths back up inventory but will still be on the original disk. Reinsert the original disk, and the old inventory from the shop will still be in RAM. remove it by trying to add a character that does not exist. Attempt to 'buy' something and the inventory is read from your original disk which includes all your magical items sold to Garth. Follow these steps and you can get as much magic as you like.

THE REVIEW BOARD

Save your character just before you enter the Review board, so that if the increases are not enough, reload and try again, as the increase in stats are not the same each time. These tips also work for BARDS II AND III.

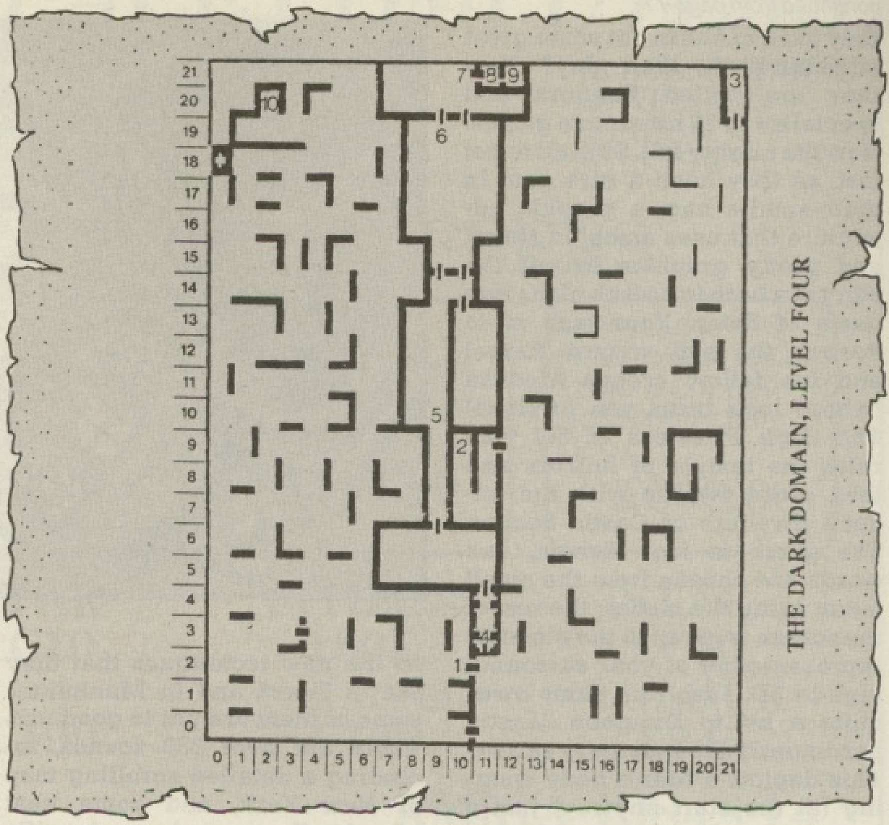
POOLS OF RADIENCE
REPRODUCING MAGIC (OR ORDINARY) ITEMS.

Formatt a blank disk, load game and go to training room. Answer YES to question, and an options menu appears. REMOVE each character to save them to disk, load them back, and trade an item from one to another. REMOVE the itemless character onto your blank disk , then load him back from your permanent character disc, and he will have everything he had before.

MAKING LOADSAMONEY

The 'manual' can be found in the library, and its worth 50,000 gp's. Reproduce it as often as you like using the above method.

NEXT MONTH, HOW TO GET AS MUCH EXPERIENCE AS YOU LIKE



ADVENTURE REVIEWS

TIME THIEF C64 £5.00 BIG SKY SOFTWARE 39 Old Evanton Road Dingwall Ross-Shire IV15 9RB

Don Macleod sent his game to me with the words 'here's an item of considerable rarity, a good home grown adventure.' And never was a truer word spoken. This has all the hallmarks of a story woven out of time taken not only to get the puzzles in but create a fantastic scenario with truly atmospheric words of real beauty. Take this extract for instance...' you stand beside a white pillar at the top of a hill. Rolling moorland surrounds the hill with dollops of grey mist curling in the deeper hollows. With its grassy top and forested slopes the hill is like a green froth-capped bubble in a dull frozen sea. A pale sun ladders the eastern sky with pillars of airy light.' Doesn't that just want to captivate you and take you right there? The adventure is crammed full of these long descriptive passages, complemented by a novelette in the package.

The plot is about time. Kedrigern the Wizard is in trouble, his time share travel business is facing ruin. Why? because certain travellers are returning dead, just dry husks withered with age to be precise. Now this will not do. Someone is stealing his clients time, where he allows them to go forward and sample their retirement time in their youth. Jocasta your twin is still missing out there somewhere, you just have to find her somewhere in time. You enter the portal and arrive you no not where. This is how the story opens, and goes on into a strange house with ghostly visions and strange creatures and all manner of wonderful things. There are three ram saves available to you, an oops command, and verbose or brief text a la Infocom. This game reminds me of the all text Level 9 games that were, which is high praise indeed, and it comes in two parts on disk only, so cassette owners sorry! Well done, Don for a memorable adventure, please send me some more quickly.

PERSONAL RATING 10/10

GALDREGONS DOMAIN

Pandora Amiga

Remember Interceptor and how

cont. on next page

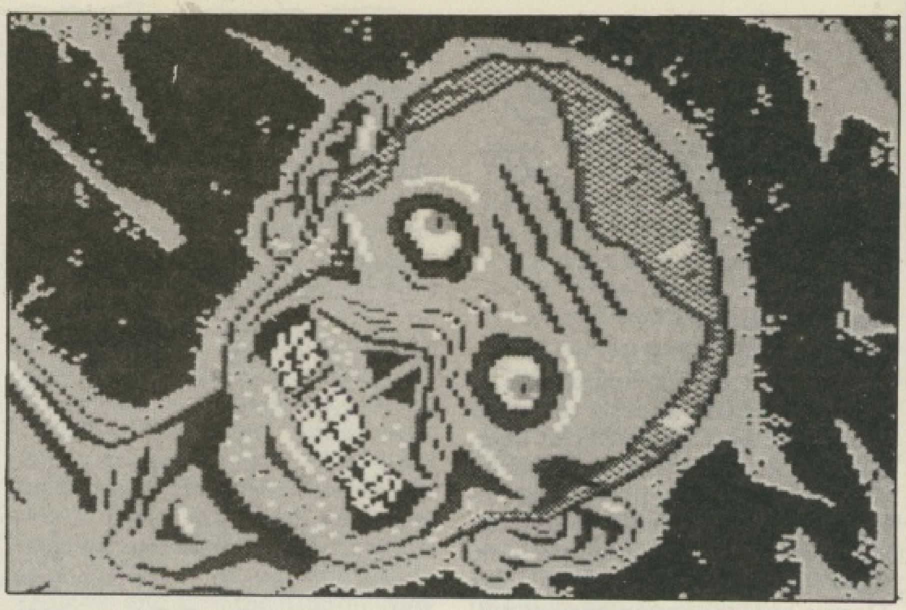
continued from page 71

they used to churn out some great adventures in their day? Now they are called Pandora and specialise in 16 bit arcade games. How the mighty fall. Still, all is not lost, as they have a rare gem in their saddle bag, a graphic adventure that uses sampled sound and pretty graphics to tell the story of a hero in search of the five gems of Zator. Your task is to destroy the evil wizard Azazel and his fellow creeps Medusa (whose look turns you to stone) The High Priestess of Set who rules the temple of horrors and then cross swords with the undead dwellers of Castle Secnar. The game is icon driven, and words are chosen from the small menu using the mouse, the rest of the screen is given to the pictorial representation of your surroundings in 3D. I feel the game owes quite a bit to Dungeon Master particularly the inventory screen. This depicts a Man's body wearing (at the start anyway) just a loin cloth. As you buy or find extra armour he will wear that item. Rather fortunate really, I mean you can't fight goblins and werewolves in just a loin cloth now can you. All-in-all Galdregons Domain is a fairly simple game, you just need to kill the five guardians of the gems and return them to the king to win, what makes it more complicated is that most of the guardians live in the centre of some wicked mazes that need certain mapping or death. There is a sequel planned that has animated monsters and characters and full dialogue rather than the limited parser that now exists. Till then I would recommend this one as a lively bit of fun.

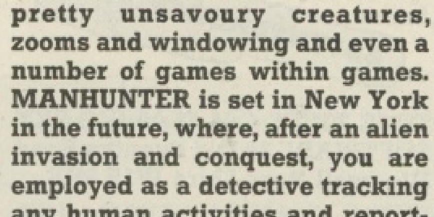
PERSONAL RATING........7/10

MANHUNTER NEW YORK
SIERRA/ACTIVISION £19.99

Sierra are fast making a name for themselves now that they have diversified away from the Kings Quest series into other realms of adventure writing. MANHUNTER heralds a new Orwellian horror theme that goes a long way to justifying the enormous expense that Sierra have invested in their new writing system. My interview with Al Lowe touched on the new techniques that they use at Sierra and in Manhunter some of them are put to good use. There are over 250 scenes, including a detailed scrolling map of New York, and some neat visual effects such as horrific close ups of eyes getting bitten away, nose to nose with some pretty unsavoury creatures, zooms and windowing and even a number of games within games. MANHUNTER is set in New York in the future, where, after an alien invasion and conquest, you are employed as a detective tracking any human activities and reporting subversive actions. As the story progresses, you will have to choose between allegiance to good or evil , a choice that will ultimately chamge the outcome of the game.



You begin the game in your room, when upon being woken by an alien droid you are commanded to seek out a human that has been spotted near the Hospital. Using your portable mini computer, you teleport to the scene and explore the area. Amongst other things, you come across a bombed wall at the side of the hospital and climbing through finds you in the morgue. Strange things are afoot, and I do not recommend examining one of the bodies you find there! Further tracking and teleporting finds you in Central park with your human disappearing down a toilet. Dare you follow. Other locations include a creepy carnival in Coney Island, a visit through a post holocaust Manhattan and a weird bar where your initiation is to throw four knives between a hooded punk's fingers!



If you thought Sierra was only about Pixies and Fairies forget it , with Manhunter they have well and truly entered the horror genre in a novel and unique way. Using their now standard design of 3D movement Sierra get you on your way via the manual with a 'walk through' getting you about a quarter of the way in, after that you are on your own. Miss this at your peril.

PERSONAL RATING 9/10

SO WE COME TO THE END OF ANOTHER CHAPTER IN THE CCI ADVENTURE CHRONICLES. NEXT MONTH I HAVE REVIEWS OF INFOCOM'S JOURNEY, SHOGUN AND BATTLETECH, NOT TO MENTION ANOTHER SIERRA GAME ,GOLDRUSH, AS WELL AS ALL THE NEWS AND VIEWS OF THE ADVENTURING WORLD, SEE YOU NEXT MONTH.

FUTUREPLACE COMPUTERS

Telephone: 01-692 8700

12 LOAMPIT HILL
LEWISHAM
LONDON
SE13 7SW

AMIGA SPECIAL OFFERS

AMIGA A500
INC
TV MODULATOR

£369.00

AMIGA A500
AIR MILES PACK
INCLUDES TV
MODULATOR

£450.00

AMIGA A500 +
TV MODULATOR +
A501 EXPANSION +
DRAGONS LAIR

£519.00

AMIGA A500
PLUS AMIGA 1084S
STEREO COLOUR
MONITOR PLUS
LEAD

£609.00

CITIZEN 120D

PARALLEL

£138

STAR LC10

£199

CITIZEN 180E

PARALLEL

£159

STAR LC10 COLOUR

£245

AMIGA 1084S 14" COLOUR MONITOR

£289

CAMERON HANDY SCANNER

GREY SCALE TYPE 4

£299

AMIGA 1900M 12" MONO MONITOR

£99

PUBLISHERS CHOICE
INTEGRATED DTP
SOLUTION
INCUDES: KINDWORDS V.2.0
PAGESETTER V.1.2 ARTIST
CHOICE AND HEADLINE
£89

Mouse mats	£4.99
Wiz card	£3.99
50 Cap disk box	£7.50
100 Cap disk box	£9.95
Cobra Joystick	£11.95
Pro 5000 Joystick	£14.95
Memorex 2S/4D Disks (Special Limited Offer)	£25.00 half price
Joystick extender	£5.95

A501m 1Mb UPGRADE	£139.00
CUMANA 2nd DRIVE 1Mb	£99.99

ALL PRICES INCLUDE VAT PLEASE ADD £1.50 P&P FOR ORDERS UNDER £50.00. WE ACCEPT VISA, ACCESS, AMEX AND DINERS CLUB. PLEASE MAKE CHEQUES PAYABLE TO FUTUREPLACE LIMITED. ORDERS RECEIVED FOR DISKS WITHOUT P&P WILL INCUR 2 DISK PENALTY

TOO FAR TO TRAVEL?
WHY NOT TRY OUR
MAIL ORDER SERVICE
01-692 8700

3 1/2" DISKS

10	£8.90
25	£22.00
50	£43.00
100	£84.00

PLEASE ADD £1.50 P&P FOR ALL DISK ORDERS

WHERE ARE WE

We are located on the main A20 between Lewisham and New Cross nearest British Rail Lewisham. Turn right out of station and we are 5 mins up the road towards New Cross on the right. Opposite the Angel Public House. A 36B bus passes the door. Please check stock availability before travelling to save disappointment. Thanks.

30% OFF LEISURE SOFTWARE

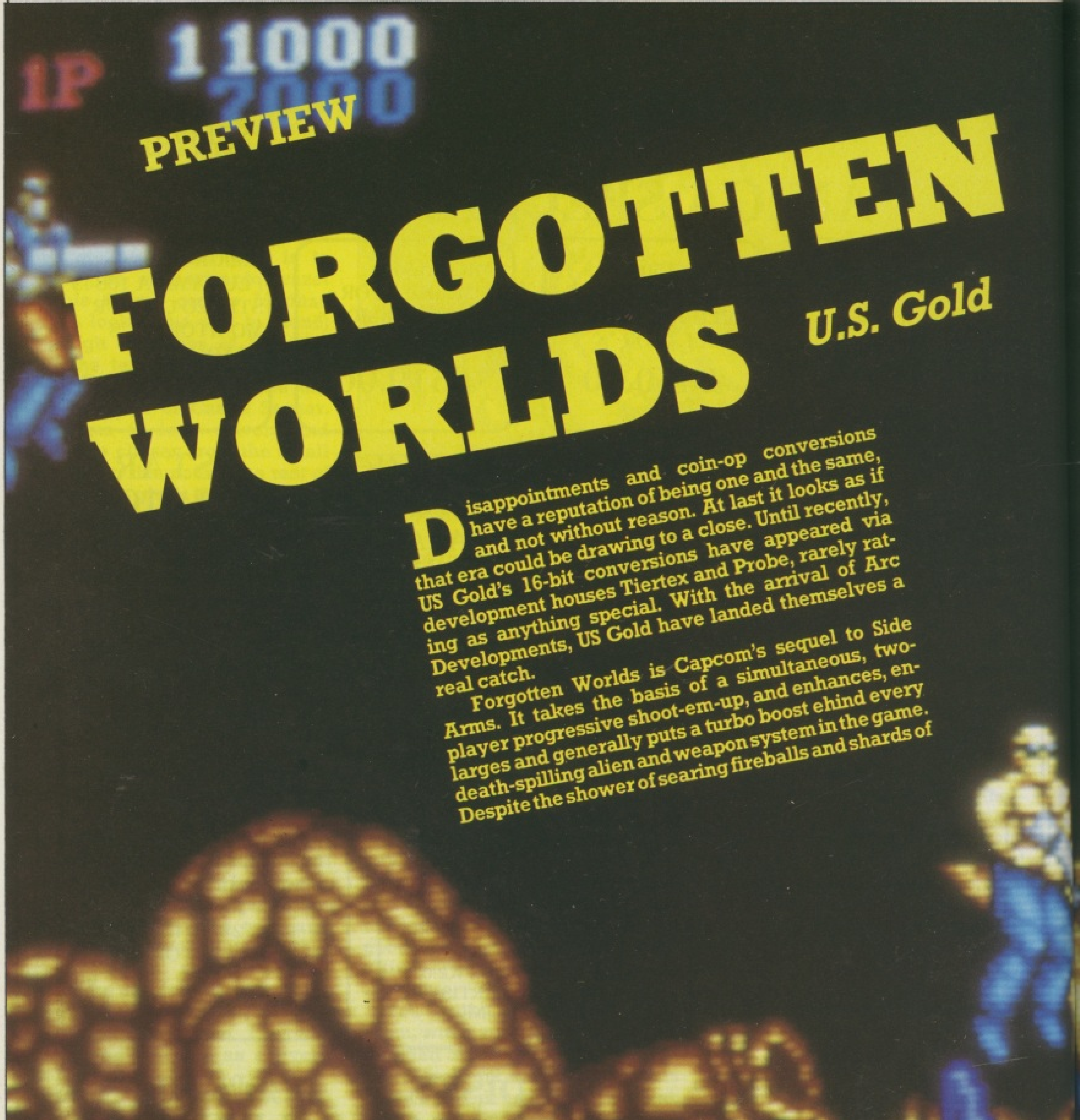
EXAMPLE PRICES

DRAGONS LAIR	£31.50
THE KRISTAL	£21.00
R-TYPE	£17.50
SPACE HARRIER	£14.00

SPECIAL OFFER

£8.00 each

BARBARIAN - THUNDERCATS - BUGGY BOY - WIZBALL - IKARI WARRIOR - AMEGAS - TERRORPODS - MERCENARY



PREVIEW

FORGOTTEN WORLDS

U.S. Gold

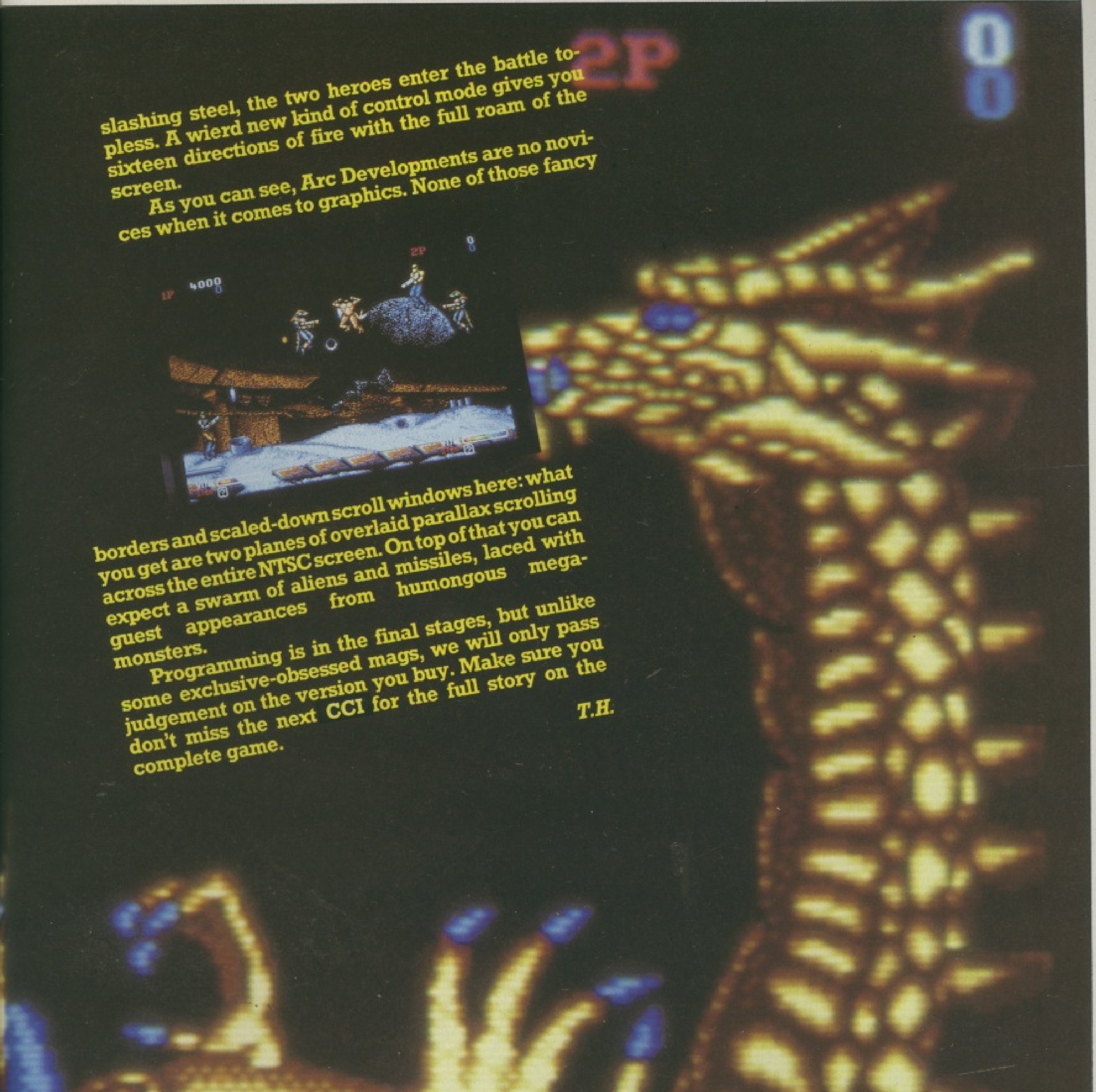
Disappointments and coin-op conversions have a reputation of being one and the same, and not without reason. At last it looks as if that era could be drawing to a close. Until recently, US Gold's 16-bit conversions have appeared via development houses Tiertex and Probe, rarely rating as anything special. With the arrival of Arc Developments, US Gold have landed themselves a real catch.

Forgotten Worlds is Capcom's sequel to Side Arms. It takes the basis of a simultaneous, two-player progressive shoot-em-up, and enhances, enlarges and generally puts a turbo boost ehind every death-spilling alien and weapon system in the game. Despite the shower of searing fireballs and shards of slashing steel, the two heroes enter the battle topless. A wierd new kind of control mode gives you sixteen directions of fire with the full roam of the screen.

As you can see, Arc Developments are no novices when it comes to graphics. None of those fancy borders and scaled-down scroll windows here: what you get are two planes of overlaid parallax scrolling across the entire NTSC screen. On top of that you can expect a swarm of aliens and missiles, laced with guest appearances from humongous mega-monsters.

Programming is in the final stages, but unlike some exclusive-obsessed mags, we will only pass judgement on the version you buy. Make sure you don't miss the next CCI for the full story on the complete game.

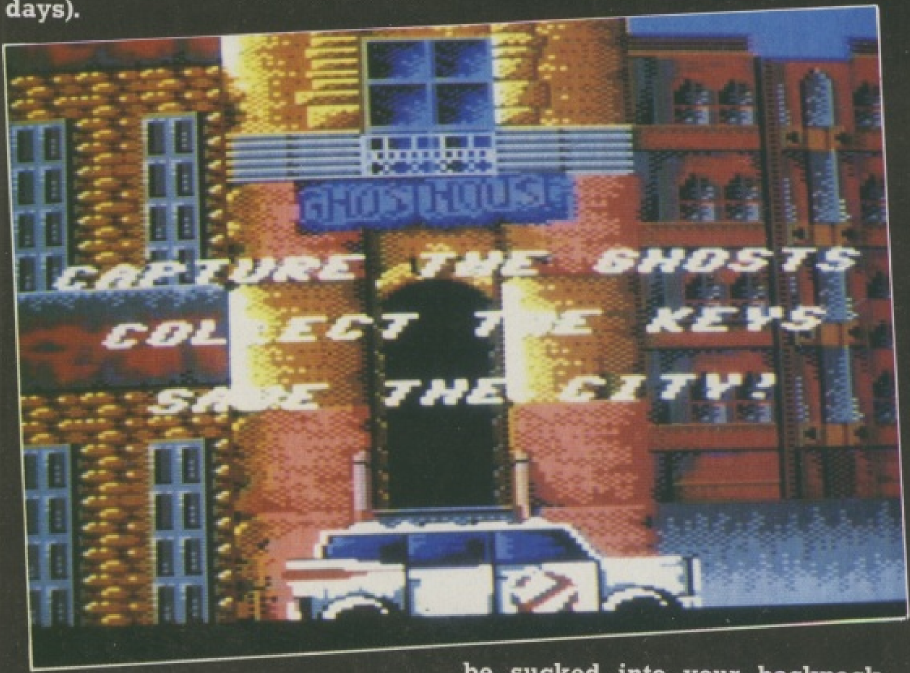
T.H.



Activision

The Ghostbu

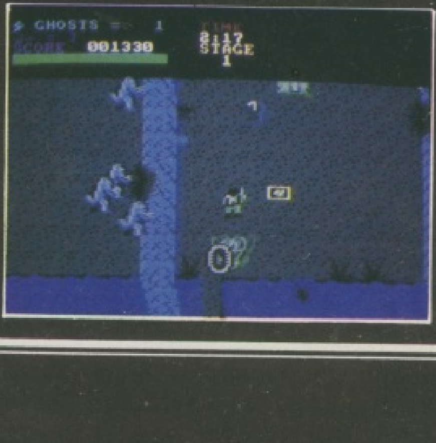
Going on the immense success of their recent re-release of Ghostbusters (the game of the movie), and now The Real Ghostbusters cartoons and all their associated merchandise, it looks as if Activision should be laughing all the way to the bank with the release of their second ghostbusting tie-in, assuming of course that the quality of the game has no connection to its sales figures. (There used to be a plaque on the wall of CCI. Towers that thanks CCI for helping Activision to sell 250,000 of the original game. It must have been our headline 'Ouch! He Slimes Me!" Ah those were the days).



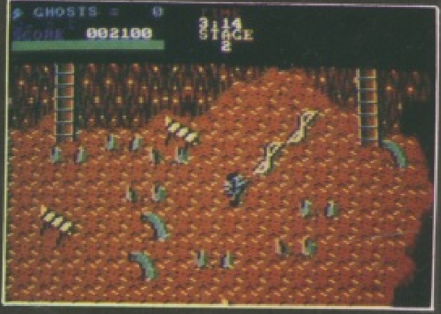
CAPTURE THE GHOSTS
COLLECT THE KEYS
SAVE THE CITY!

An epidemic of phantoms has broken out, and your monopoly of the de-spooking market means you get the job of cleaning up the lot, single-handed or with a second player. Imagine Commando with ghosts instead of troops and you will have some idea of what to expect. Each of the ten levels is based on the same idea, which is to zap your way to the top of the scrolling backdrop. Your ghostbusting equipment consists of two types of gun: a standard single-shot weapon and a proton beaqm projector. Shots from the puny zapper are unlimited but ineffective, while the beam runs off a small power supply. Either weapon can be used to shoot the spooks which can then be sucked into your backpack with the beam.

Shooting such oddities and oildrums and wheelbarrows reveals bonus icons. Pick these up for slight weapon upgrades, a shield or a friendly slimer who floats around destroying anything he touches. The end of every level is haunted by the usual guardians, which in this case are all pretty insignificant and something of an anticlimax. Defeating these brings on a feeble sequence of the ghostbusters discharging the spooks collected from the last level, as the corresponding bonus points clock up. The game continues much as before on the next multi-loaded level, except for a change in the background graphics.



The Ghostbusters theme plays the whole time. I could bear Ray Parker Jnr.'s original in short quantities, but in '89 the tune is on its last legs, especially in this whiney 64 format. A confusing bird's eye viewpoint with a 3D slant gets the graphics off to a bad start, followed up by some totally indistinguishable sprites.



To be fair to the programmers, the original coin-op was not up to much. I would have liked to see Activision come up with their own design instead of converting the arcade game; the Ghostbusters tie-in would still have worked, and the game itself would also have had a chance of turning out a lot better. If you never bought the first game, I suggest you pick that up in its budget form and pencil in the word "Real" on the cassette.

Real
usters

Graphics: 35%
Sound: 82%
Playability: 49%
Overall: 39%

Price: £9.99 (c)
£14.99 (d)

Graphics: 50%
Sound: 46%
Playability: 38%
Overall: 35%

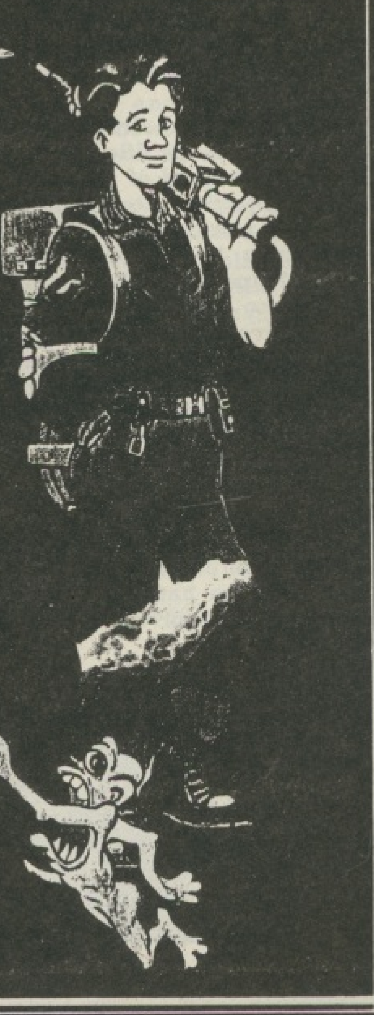
Price: £24.99

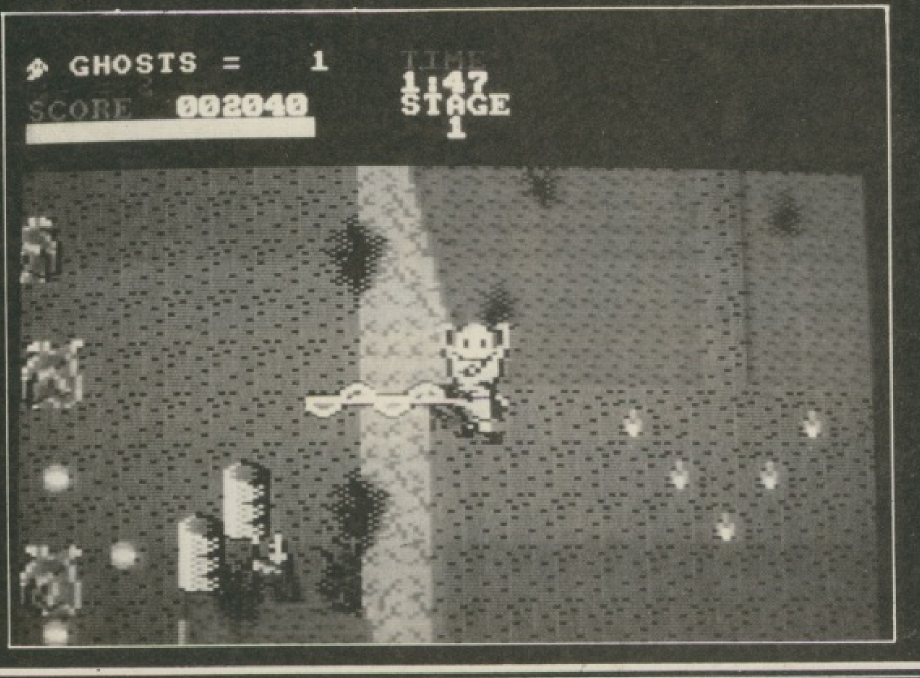
AMIGA

The 16 Bit graphics are on a marginally larger scale, but lose out in the quality of the scrolling and an extensive over-use of alternate-pixel shading. Again, that music constantly irritates, while the proton beam drowns out any other sound effects. Gameplay on the Amiga is worsened by inaccurate collision detection. Oh dear, what a pity that the original excellent movie has been let down like this. Who said that a sequel is something that follows a success and is always worse? *T.H.*

Successfully sliming it

Ghostbusters is one long success story as far as merchandising and tie-ins go. It began with the feature film, backed up with a star cast and state-of-the-art special effects. Ray Parker Jnr.'s chart success with the theme song got everyone humming the title, and before long the official home computer game was launched and sold in immense quantities and continues to do so at a budget price. With the reappearance of The Real Ghostbusters in the cartoon series, there was more demand than ever for the new line of ghostbusting dolls, toys and clothing. Data East bought the rights for the coin-op. It is thought the sales of the Ninento version will exceed 1,000,000 in the U.S. alone. Data ???? sold the home computer rights to Activision who released the original Ghostbusters.

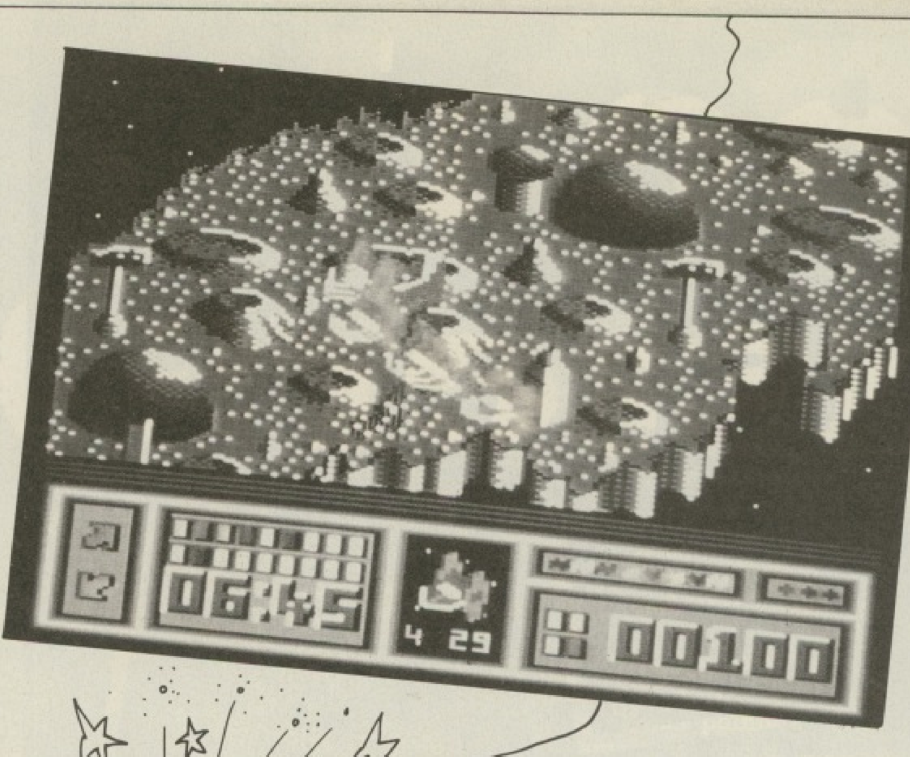


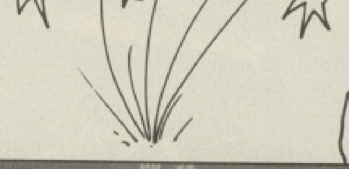


Software houses seem to be releasing more compilation programs, and re-releases than original software these days at least on the 64.

This is not all bad - they offer good value for money and plenty of varied entertainment, but is it worth waiting those extra few months for them to come out in one big pack?

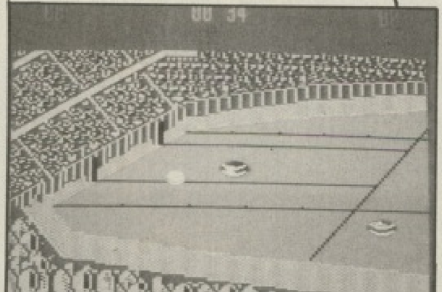
First off is *Xeno* - a futuristic sport simulation using a pitch, three pucks and two goals. The idea of the game is to push the small puck through your opponent's goal using your large puck. Both players have a large puck each, and take turns sliding their pucks into the smaller one to make them collide, and hopefully cross the goal line. Graphics and sound are both no more than average but the gameplay is fun for a short while.





Leviathan puts you in control of a powerful flying ship set out to destroy enemy ships that you will find across three different planet zones. *Levithan* looks and plays very similar to that of Zaxxon, an age old shoot 'em up. You start with five lives, limited fuel and missiles. You can collect extra fuel by landing near the fuel pods or by shooting the spinning cubes. The game has a very colourful look to it and the music is quite catchy. On the whole not a bad game but there are better around.

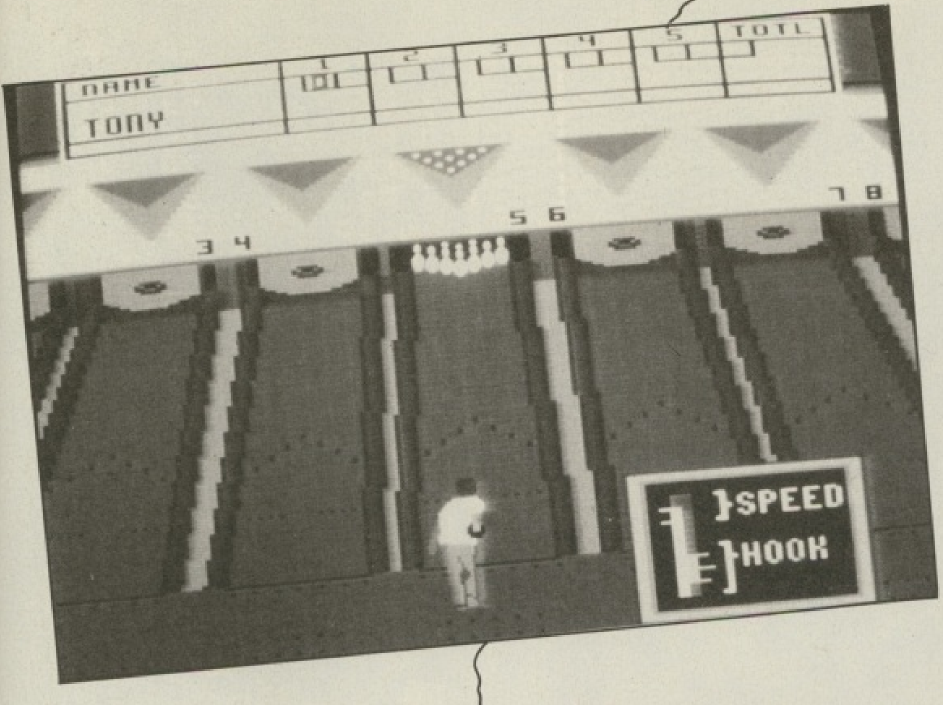
Next comes *Armagedon Man*, your role, as the title suggests, is to prevent the end of the world. Your main objective is to keep the world in good working order, there are 16 countries in the UNN which you must help. They will ask for advice, guidance and approval and you must give it as you are the Supreme Commander. Every war game I have played has bored me rigid, and I have to say this is no exception. The music is the games best point, but the graphics are unimaginative and dull.



Mercenary was a huge hit a few years back using vector graphics in this explorational arcade adventure. It also has a bit of a flight simulation involved as well as all the rest. You have crashed landed on a planet and must make money by becoming a paid soldier fighting only for money. This still stands up well to many other take offs and doesn't look dated considering how long it has been out

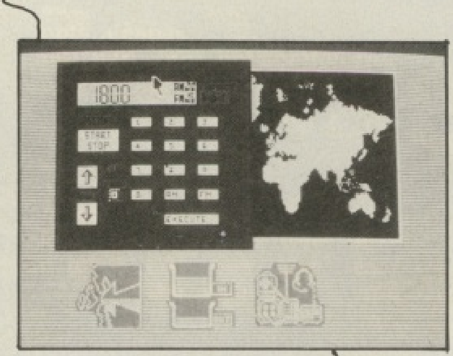
Cholo on the other had is quite the opposite. It uses the same style of graphics but plays a great deal more slowly and the vectors haven't been drawn nearly as well. You are on ground only and have to find misguided robots, hack into them and re-program them. Cholo is an old game and it shows, it wasn't a good

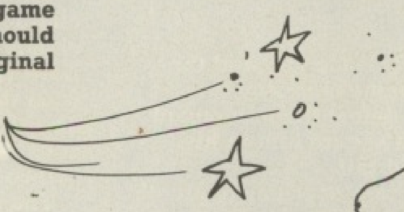
Com Perfor



game when it first came out and it seems even worse now.

Now for a change of scene with *Trantor.* You are the last storm-trooper equipped with the very latest in flame throwers. Find the eight letters located in the eight terminals to find a computer related word, then find the security terminal and enter this word. Your main sprite is very large and well defined (although rather colourless) and the sound is also high quality stuff. All in all, a good well balanced game with lots of action, which should have more success on its original release.





Shackled is another Gauntlet variant now out on a budget label. Your friends have been captured and thrown into dark and dingy cells. Guess who has to save them? That's right, you. The game is played over a range of floors, each making up the dungeon. Collect keys to open doors and also pick up items that guards drop when destroyed. Sound is O.K. on the title screen but the rest is below average. The sprites are very small and badly defined and the gameplay is pretty naff.

Producing a bobsleigh game has to be the daftest idea a programmer could have thought up. ***Bobsleigh*** puts you in the drivers seat, the idea is to guide your sleigh around numerous courses avoiding crashes so you don't have to pay any unnecessary bills. This is one of the worst games in the pack and wouldn't hold anyone's interest for long.

On a higher note is Accolade's *Hardball.* A real quality baseball game using giant lifelike sprites for one or two players. Choose your type of spin if you're bowling or get ready to steal those bases if you're on the batting side. Still a great game considering its age, in fact a real classic.

Last on the list is another sports simulation with the name of 10th Frame. A slick and well programmed ten-pin bowling game for up to eight players. Access, well known for their superb golfing range of games have a very high reputation in the animation department as well as in the gameplay, and *10th Frame* is no different. Also out on budget, this is the best game in the package.

Most of the games on the compilation are either average or below apart from a couple of exceptions. My advice is to buy the best games separately on their budget labels and forget about the rest.

D.H.

Overall: 57%
Price: £12.99(c) £14.99(d)

mand

U.S. Gold

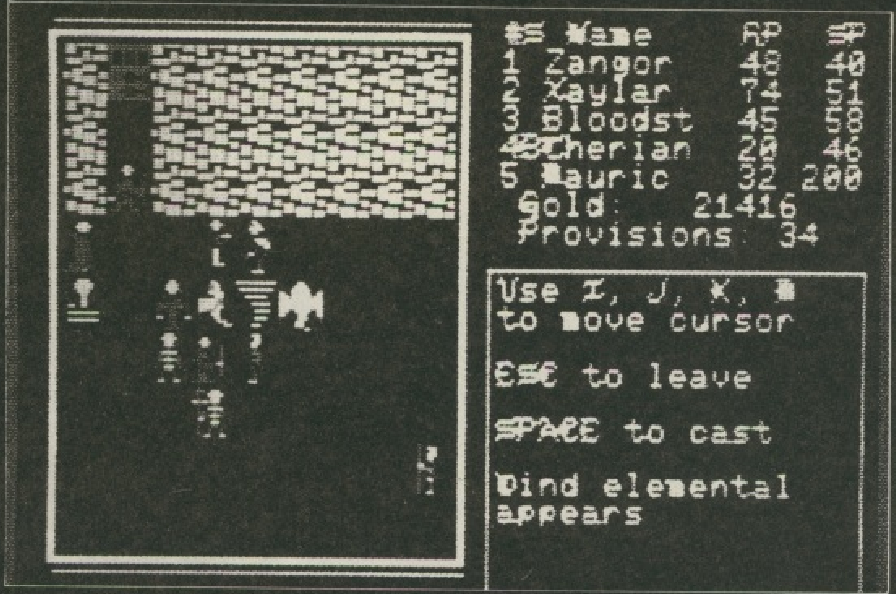
mance

Computerized Fantasy Role Playing Games (FRPG) are big business nowadays and it comes as no surprise to find that all the major software houses are currently trying to snap up the rights to the more famous 'brand name' fantasy games.

However, while all the other companies were originally dithering about performing in depth background research, SSI were busily pulling off a major coup by persuading TSR to sign on the dotted line.

TSR own the rights to the most popular FRPG in th world – Advanced Dungeons and Dragons – and when SSI computerized it, in the guise of the Pools Of Radiance, *the game sold over 150,000 copies in the USA on the C64 format alone, making it one of the biggest selling computer games ever released.*

SSI, quick to realise that they were onto a good thing, had no hesitation in getting two top American programmers together to create their own computerized FRPG.



```
#S Name      RP  SP
1 Zangor     48  40
2 Xaylar     74  51
3 Bloodst    45  58
4 Cherian    20  46
5 Mauric     32 200
  Gold:    21416
  Provisions: 34

Use I, J, K, M
to move cursor

ESC to leave

SPACE to cast

Wind elemental
appears
```

Demon's Winter

US Gold

A long time ago the peoples of Ymros were harried and persecuted by an evil demon called Malifon. He performed all kinds of horrific acts upon population and it seemed Malifon was to be dictator of the world, as there was no-one who was brave enough to oppose him.

However, just when it looked like Malifon was going to take command, five brave adventurers appeared on the horizon and did battle with the evil demon. After a long and bloody fight, the adventurers eventually captured the demon and entombed him in a dormant volcano with a magic so strong that he could never escape.

During this period Malifon planned his revenge casting one mighty spell that covered the earth in a deep frigid winter and turned all the seas to blood.

In the ensuing chaos, Malifon's supporters are actively searching for ways to release him and the aim of the game is to stop this happening, defeat the minions of Malifon and secure him in his underground jail.

Initially the player has to create a party of five characters and any readers who are familiar with SSI's previous releases will find this a very simple task. That said, the key to the game is getting the balance of the party right from the outset. A player must first choose what race they want their characters to be and they have the choice of either Human, Elf, Dwarf, Dark Elf and Troll – each, apart from the human, has special innate abilities that have to be taken into consideration when making your selection.

> *"Human, Elf, Dwarf, Dark Elf and Troll – each, apart from the human, has special innate abilities that have to be taken into consideration when making your selection."*

The next thing to do is to generate your characters nine Traits, namely; Speed, Strength, Intellect, Endurance, Skill, Level, Hit Points, Spell points, and experience. These are selected randomly by the computer and give you a good indication how your character will be able to fight with weapons, cast spells and generally survive in the hostile environment on Ymros. Once that is done you have to allocate your character a class. There are ten classes in all, each of which have their own special abilities, they are; Ranger, Paladin, Barbarian, Monk, Cleric, Thief, Wizard, Sorcerer Visionary and Scholar. Once again, careful consideration must be given to the composition of your party. If you choose too many warrior types, you will have a group of adventurers that can fight tremendously at close quarters, but will be very vulnerable to magical attacks. If too many magicians are selected then they will fight excellently from afar, but will be slaughtered in hand to hand combat.

My advice here is to read the 30 page rule book thoroughly and take the tips it gives you into account when you make your initial selection. Also don't be afraid to make outrageous selections.

> *"I created a Troll who specialized in the martial arts and I ended up with a character who was a cross between Bruce Lee and Arnold Schwarzenegger."*

I created a Troll who specialized in the martial arts and I ended up with a character who was a cross between Bruce Lee and Arnold Schwarzenegger. He could do more damage with his hands and feet than most of my other characters could do with their weapons!

Once your party is complete, they can begin their long, hard journey to eleminate Malifon's forces. Exploring the land will reveal that each day on Ymros is 36 hours long, while each month consists of 34 days.

Ymros has a varied terrain, each of which house their own special dangers. The plains contain hostile bands of marauding Magic Users and their hired violent thugs, as impressed with the games graphics. Your forces travel around the well depicted country in the shape of a solitary humanoid. When you meet hostile forces you are automatically put into a combat situation, which entails your character being transfered to a combat screen, where your character quickly divides up into the five characters making up your party. Each character is controlled individually and you move them one at a time. The movement phase of the game is very quick and adds to the overall excitement, as unlike some other games I could mention, you don't have to sit and wait for your characters to crawl slowly across the screen. Combat continues until either your party are killed, your opponents are killed or you manage to move all of your characters off of the screen through one chosen exit square. You lose nothing by running away and it is advisable to take this option especially when you are out numbered and out spelled from the outset.

Demon's Winter is very much an exploration game. Initially you just wander the land engaging various creatures in combat for nothing much more than dinner money. However, once you have got to grips with the combat system, which is impressively fast and can be totally controlled from the joystick, you begin to pick up various rumours and pieces of information which lead to several important quests.

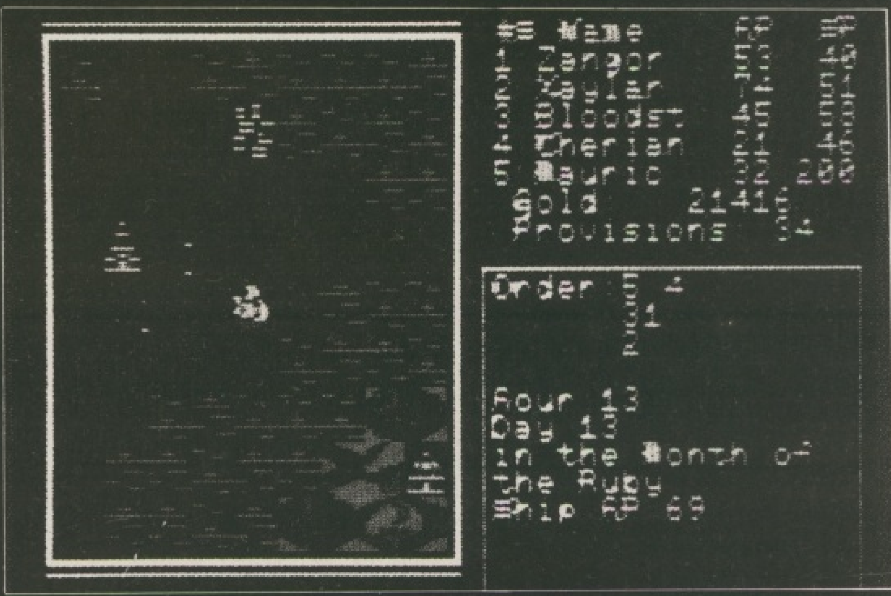
It is then up to you to piece together the information you obtain and ultimately you will discover where Malifon is located. All you have to do then is destroy him. Taking into account some of the monsters I have already engaged in combat — this is easier said than done.

Overall *Demons Winter* is a highly enjoyable game, which runs both quickly and smoothly. It contains a whole heap of challenges which range from making strategic combat decisions to piecing together many small fragments of information, which when placed together in the correct fashion unravels a complex plot.

I have played this game for more than 25 hours and I can believe SSI when they claim that it has over 80 hours playing time. I don't think that I have done much more than scratched the surface so far. Recommended.

W.

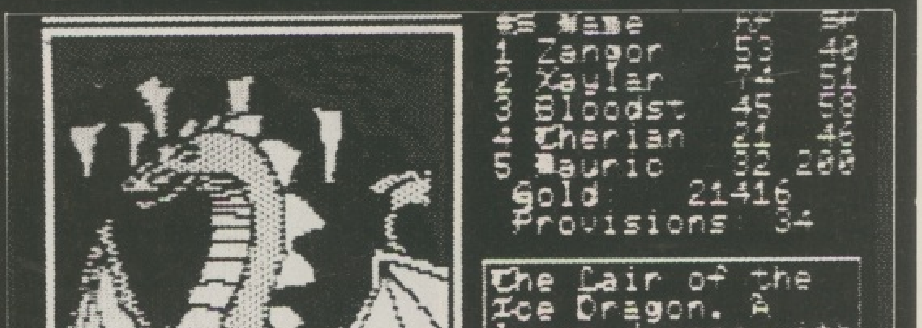
Rating: Awesome
Price: £19.99



```
#S Name      [illegible] [illegible]
1 Zangor     53  40
2 Xaylar     74  51
3 Bloodst    45  30
4 Therian    21  46
5 Mauric     32 208
 Gold     21416
 Provisions   34

Order 5 4
      3 1
      2

Hour 13
Day 13
in the Month of
the Ruby
Ship HP 69
```



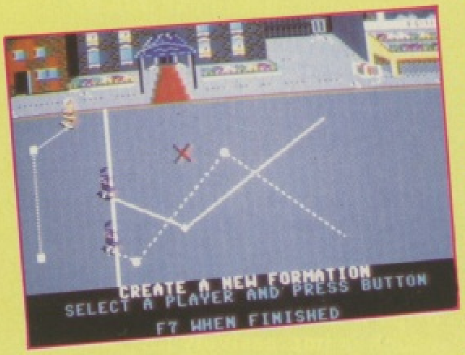
```
#S Name      [illegible] [illegible]
1 Zangor     53  40
2 Xaylar     74  51
3 Bloodst    45  30
4 Therian    21  46
5 Mauric     32 208
 Gold     21416
 Provisions   34

The Lair of the
Ice Dragon. A
large dragon with
icy blue scales
glares at you
with anger. Even
his eyes seem to
eminate a biting
chill
```

Street Sports Football

Epyx

Baseball, basketball and soccer have all been given the Street Sports treatment by Epyx, once the kings of the computer sports field. Football (American style) follows the Street Sports theme very closely, leaving the big league stadiums for carparks and wasteground where gangs of kids play the game their own way.



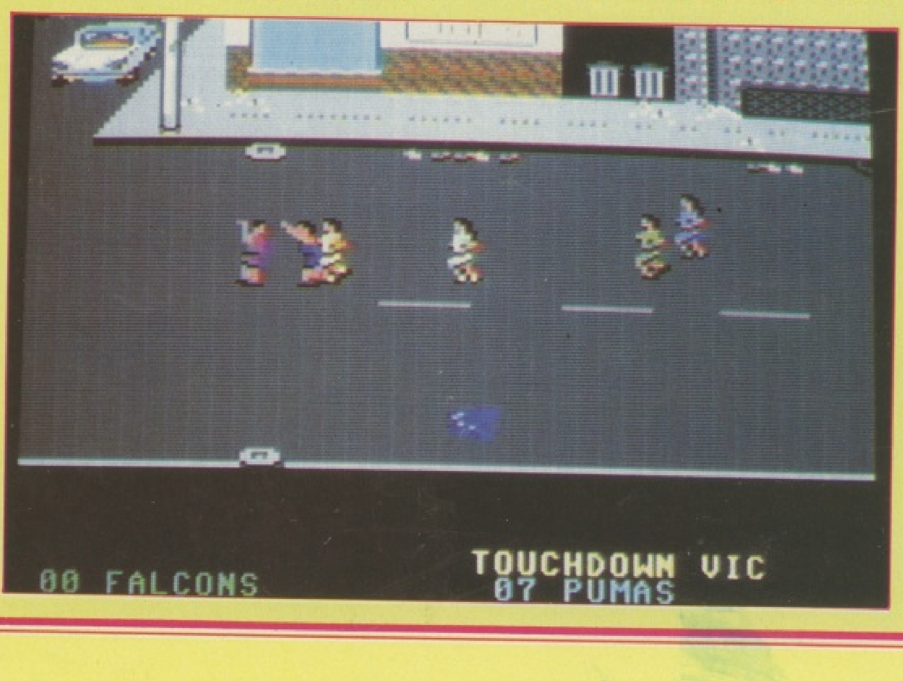
CREATE A NEW FORMATION
SELECT A PLAYER AND PRESS BUTTON
F7 WHEN FINISHED

> *" Selecting the playmaker allows you to edit any of the plays or create some from scratch."*

Inkeeping with the rest of the series, there are a few choices to be made before you start the game. First is the option to enter the playmaker. The program comes with 32 plays for use in the game, all of which are described with diagrams in the instructions. Selecting the playmaker allows you to edit any of the plays or create some from scratch. Next is a choice of two playing fields, each with its own particular assortment of oil slicks, crates and the like littered about the place. Next you pick your team from a line-up of nine kids. Some catch well, others are fast and some are good all-rounders. Once the computer is completely sure you are happy with your team, it lets you get on with the game (after giving you access to a few more game variables).

Your team consists of the bare minimum of players: just two receivers and a quarterback. Pressing fire cycles through the team, highlighting the player under your control. The quarterback starts under computer direction, running along his predetermined path until you decide to take control. If you decide to pass, the selected receiver then comes under your control for the rest of the play. Often the best idea is to run it with the quarterback, as the defence tends to be quite slow on the easier skill level.

You could not hope for a wider range of plays to choose from, but the series of similar sequences punctuated by regular pauses could do with a bit more excitement. Just three players per team



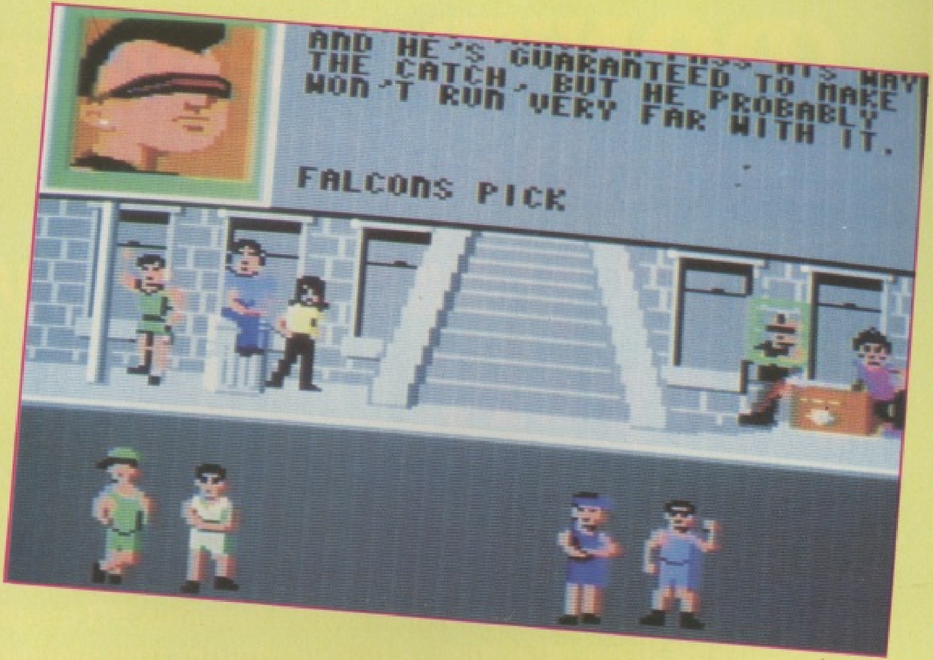
00 FALCONS
TOUCHDOWN VIC
07 PUMAS

gives it all a very small-scale feeling, and tends to lead the game into a repetitive cycle. Putting the game into a more everyday setting with kids instead of pros is a good one, but in this case, the result is a drab version of what is usually an extremely colourful sport.

> ***" Graphics are not necessarily important in a sport simulation (look at International Soccer for example), but flowing gameplay is"***

While the sprites are small, they are animated well, and the option selection screens are attractive. Graphics are not necessarily important in a sport simulation (look at International Soccer for example), but flowing gameplay is, and that is something of which Street Sports Football has a shortage. One for American football fans, but few else.

T.H.



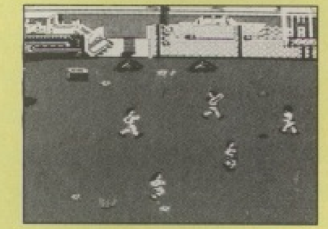
AND HE'S GUARANTEED TO MAKE THE CATCH, BUT HE PROBABLY WON'T RUN VERY FAR WITH IT.

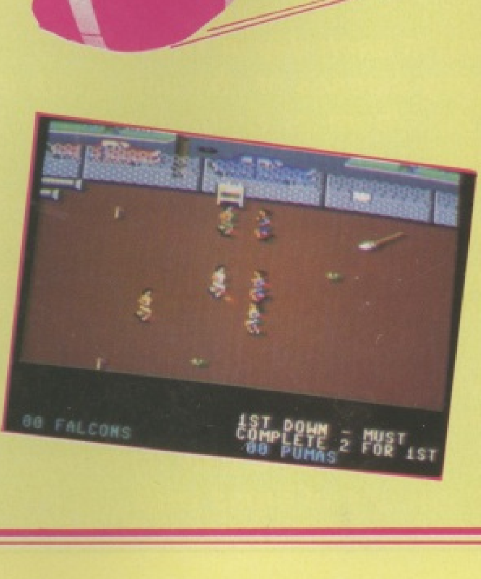
FALCONS PICK

Graphics: 65%
Sound: 30%
Playability: 67%
Overall: 67%

Call it Murderball ...

The origins of American football, and even soccer for that matter, lie in a game known as mob football. The game of mob football was traditionally in England a huge event, with almost the entire male population of small towns taking part. Wide goals would be placed at opposite ends of the town and the participants split into two teams. The object was to get the 'ball' (usually a stuffed pigs bladder) into the opposing team's goal by any available means. There were no rules to speak of, and the ball could be kicked, headed or just carried. As you can imagine, it was a far cry from the rules and regulations of modern day football. Similar games are played on a smaller scale today, often called murderball, though the original game, in all its chaotic glory is still played occasionally in some parts of England. For example at Eton where the Wall game often goes on for years without a goal being scored. Like a public school education in England — for masochists only ...





00 FALCONS

1ST DOWN – MUST COMPLETE 2 FOR 1ST

00 PUMAS

(DON'T) Beware of Demons!!!!

And you can win a CD player!

SSI/U.S. Gold's new smash hit in the role playing games style, Demon's Winter has aroused big, big interest from the RPG crowd. Wayne, co-editor of G.M. magazine raves about it as you will see from the review in this issue of CCI. So do U.S. Gold's luscious PR lovelies Danielle and Tracey (We asked them what kind of non-computer role playing games they liked best but they wouldn't tell us!)

But they have given us a smashing portable Crown CD player each as prizes for a Demon's Winter competition.

So all you CD playerless readers here's your chance to grab yourself one and lord it over the world as you speed down the street. You can also of course, connect it to your elephant-sized loudspeakers and blast the blues away too, if the neighbours can stand it ...

All you have to do is answer the questions, correctly of course! You can get some excellent clues in the review of Demon's Winter on pages 80 and 81.

Except for question 6. Tracey, who is a big heavy metal fan says that loads of RPG players love that loud, loud noise stuff and there ought to be a question that needs a bit heavy metal brain in it. So she set question 6 and we are going to try to get her to add a signed photo of her in her really snazz heavy m.leather minigear to send to the winner.

1. What was the name of the game that was the computerised version of Advanced Dungeons and Dragons?

2. What machine was it first released on?

3. Who are the five characters from which your chose in Demon's Winter?

4. How long is each day in Ymros?

5. How many classes of characters are there?

6. Name an album of Celtic Frost and where the Sugar Cubes come from.

That's all you have to do, folks ... Answers on a postcard must reach us by September 1st, 1989 (Aussie readers have been asking us for longer lead times as they don't get the magazine so quickly — or do they just read slowly?)

Send to; CCI/Demons Winter Comp., 40 Bowling Green Lane, London
EC1R ONE

Oh yes, Danielle says that the ten runners up — and the two winners with the first all correct entries out of the Comp Bag — will get U.S. Gold T Shirts — with USG's brand new flash logo on them. (And even Tony Horgan hasn't got one of those yet!)

Accountant III

Alan and Ray Barber C128

Accountant III is a home accounting system for the C128 that does standing orders as well as monthly outgoings, including cash and check withdrawals providing you with a complete financial data base each month. After you have loaded and run the program, type Y when asked if it is the first run. Then select menu 1. The programme will ask for the month — input the first 3 letters of the month and the date. To access standing orders, press 2 when the menu appears. Menu 3 must be accessed after Menu 1.

```
10 Q$="Y"
20 S=54272:FOR Q=S TO S+23:POKE Q,0:NEXT
30 DIM A$(16),A(16),B%(16),C$(16),C(16),C%(16),E$(32),D(32),D%(32),E%(32),F
$(16):DEF FNR(X)=INT(X*100+.5)/100
40 SCNCLR:Z=0
50 COLOR4,7:COLOR5,2:COLOR0,7
60 PRINTSPC(18)"╭──╮ ╭─── ╭─── ╭──╮ ┌[SP2]┐ ┌[SP2]┐─┬─ ╭──╮ ┌[SP2]┐─┬─"
70 PRINTSPC(18)"├──┤│[SP2]│[SP2]│[SP2]││[SP2]││╲ │ │ ├──┤│╲ │ │"
80 PRINTSPC(18)"│[SP2]││[SP2]│[SP2]│[SP2]││[SP2]││ ╲│ │ │[SP2]││ ╲│ │"
90 PRINTSPC(18)"└[SP2]┘ ╰─── ╰─── ╰──╯ ╰──╯ └[SP2]┘ ┴ └[SP2]┘└[SP2]┘ ┴"
100 PRINTSPC(32)"[CD]─┬──┬──┬─"
110 PRINTSPC(33)"│[SP2]│[SP2]│ "
120 PRINTSPC(33)"│[SP2]│[SP2]│ "
130 PRINTSPC(32)"─┴──┴──┴─"
140 CHAR1,26,10,"BY ALAN & RAY BARBER"
150 CHAR1,26,12,"[SP4]FOR THE C128"
160 CHAR1,24,20,"PRESS SPACE TO CONTINUE"
170 GETKEY X$
180 IFX$<>CHR$(32)THEN170
190 GOTO2400
200 GOTO1830
210 SCNCLR:RESTORE:Z=1
220 GOSUB2140
230 PRINTCHR$(14)
240 SLEEP1.5
250 SCNCLR
260 GOSUB420
270 DOPEN#2,"ACCOUNTANT 1"+STR$(PH),D0,U8,R
280 FORR=1TO16:INPUT#2,A(R):NEXTR:INPUT#2,D$:DCLOSE#2
290 Q$="Y":T=0
300 PRINT"[CLR][CTLN][YEL][REV][SP32]♠──┌╭╱│ ♠╱│  ╲╲╲[SP34]":REM REGULAR MONT
HLY OUTGOINGS
310 PRINT"[CTLN][LGRN][CD2][SP3]_‾│ ╭┴♠_ ╲┌╱│ │L│ ┌╭│ │┌╲╱│♥[SP18]‾ATE:[LBLU][
SP2]"D$
320 PRINT:FOR R=1TO9:PRINT"[LGRN][SP2]"R".[SP3]"A$(R)".....£ [LGRN]"TAB(B%(
R))A(R):NEXT
330 FORR=10TO15:PRINT" "R".[SP3]"A$(R)".....£ [LGRN]"TAB(B%(R))A(R):NEXT
340 PRINT"[CD] "R".[SP3]│♠L♠╱─‾ ─♠──╮‾─ ─┌_o♠_─"A$(R)"..£ [LGRN]"TAB(B%(R))
A(R)
350 PRINT"[CD][CTLN][YEL][REV][SP29]│Y ♠LAN & _AY │ARBER[SP30]"
360 FORR=1TO15
370 IF ABS(A(R))=>1 THEN B%(R)=33-LEN(STR$(INT(ABS(A(R)))))
```

cont. on next page

```
380 IF ABS(A(R))<1 THEN B%(R)=31
390 NEXT
400 GOTO530
410 PRINTCHR$(14)
420 FOR R=1TO15:READ A$(R):NEXT
430 DATA"\ONTHLY ˎNCOME......","\ORTGAGE............"
440 DATA"_ATES...............","●ATER..............."
450 DATA"─LECTRIC............","|AS................."
460 DATA"|ELEPHONE...........","ˎNSURANCES.........."
470 DATA"|OUSEKEEPING........","─NTERTAINMENT......."
480 DATA"|OLIDAYS............","┐ETROL.............."
490 DATA"XEHICLE |AX.........","|UDGET ♠CCOUNT......"
500 DATA"\ISC..............."
510 GOSUB 1740
520 RETURN
530 IFQ$="N"THEN730
540 PRINTSPC(46)"[CU19][LGRN]|RANSACTION ( |//) "
550 GETKEY Q$
560 IFQ$="Y"THEN580
570 IFQ$="N"THEN720
580 T=T+1:IFT>0THEN D$=DD$
590 PRINTCHR$(14)
600 PRINT"[HOM][CD6]"
610 PRINTSPC(46)"[LGRN]ˎNPUT \ONTHLY ♠MOUNTS "
620 INPUT"[CR46]♠MOUNT ";A:INPUT"[CR46]ˎNTO ●HICH ♠CCOUNT ";L
630 REM 46 SPACES TO THE RIGHT < CRSR RIGHT >
640 IFL=1THENGOTO650:ELSEGOTO660
650 A(16)=FNR(A(16)+A):A(L)=FNR(A(L)+A):GOTO680
660 IF L>15 OR L<1 OR L-INT(L)>0 THEN600
670 A(16)=FNR(A(16)-A):A(L)=FNR(A(L)-A):GOTO300
680 GOSUB300
690 PRINT"[HOM][CD5]"
700 Z=0:FORR=1TO15:Z=Z+A(R):NEXT
710 IFABS(Z-A(16)=<0.01THEN
720 GOTO300
730 PRINTSPC(46)"[CU19][LGRN]♥UM OF ♠CCOUNTS = |OTAL |ALANCE ":GOSUB1780
740 DOPEN#1,"@ACCOUNTANT 1"+STR$(PH),D0,U8,W
750 G$=CHR$(13):FOR R=1TO16:PRINT#1,A(R);G$:NEXT
760 PRINT#1,D$;G$
770 DCLOSE#1
780 PRINTSPC(46)"[CD2]|AD"T"|RANS.":Q$="Y"
790 PRINTSPC(46)"[CD2]/EW -ILE ─ONE."
800 PRINTSPC(46)"[CD2]─O |OU ●ISH ♠NY \ORE |RANS ?":GETKEYX$:IFX$="N"THENGO
SUB1830:ELSERESTORE:GOTO210
810 PRINT"[CLR]":T=0
820 PRINTCHR$(14)
830 SCNCLR
840 DOPEN#2,"♥TANDING ┌RDERS ",R
850 FORR=1TO16:INPUT#2,C(R),C$(R),C%(R),F$(R):NEXT:INPUT#2,D$:DCLOSE#2
860 PRINT"[CLR][CTLN][YEL][REV][SP35]♠─┌,/|♠/| ˎˎˎ[SP31][ROF]":REM ACCOUNT
ANT III
870 GOSUB2070
880 PRINTSPC(52)"[CU19]|RANSACTION ( |//) "
890 GETKEY Q$
900 IFQ$="Y"THEN920
910 IFQ$="N"THENGOSUB1830
920 T=T+1:IFT=1THEN D$=DD$
930 PRINTCHR$(14)
940 PRINT"[HOM][CD6]"
950 PRINTSPC(52)"[LGRN]ˎNPUT ♥TANDING ┌RDERS "
960 INPUT"[YEL][CR52]|O ●HOM ┐AYABLE";C$
970 REM 47 SPACES TO THE RIGHT < CRSR RIGHT >
980 INPUT"[CR52]●HEN ┐AYABLE";F$
990 INPUT"[CR52]♠MOUNT ";C:INPUT"[CR52]ˎNTO ●HICH ♥LOT ";L
1000 REM 46 SPACES TO THE RIGHT < CRSR RIGHT >
1010 C(16)=FNR(C(16)+C):C(L)=FNR(C(L)+C)
```

```
1020 IFABS(C(L))=>1THENC%(L)=32-LEN(STR$(INT(ABS(C(L)))))
1030 IFABS(C(L))<1THENC%(L)=31
1040 C$(L)=C$
1050 F$(L)=F$
1060 IFL>15ORL<1OR-INT(L)>0THEN930
1070 GOSUB2070
1080 PRINTCHR$(14)
1090 PRINT"[HOM][CD17]"
1100 PRINTSPC(52)"[CU14]|RANSACTION ( |//) "
1110 GETKEY Q$
1120 IFQ$="Y"THEN930
1130 IFQ$="N"THEN1160
1140 IFQ$<>"Y"OR"N"THENGOTO1110
1150 T=T+1:IFT=>1THEND$=DD$
1160 GOSUB1780
1170 DOPEN#1,"@♥TANDING ┌RDERS ",W
1180 G$=CHR$(13):FOR R=1TO16:PRINT#1,C(R);G$;C$(R);G$;C%(R);G$;F$(R);G$:NEX
T
1190 PRINT#1,D$,G$
1200 DCLOSE#1
1210 PRINTSPC(52)"[CD]|AD"T"|RANS.":Q$="Y"
1220 PRINTSPC(52)"/EW ─ILE ─ONE."
1230 PRINTSPC(52)"♠NY \ORE |RANS ?":GETKEYX$:IFX$="N"THENGOSUB1830:ELSEGOTO
810
1240 SCNCLR:K=0
1250 DOPEN#2,"CASHBOOK "+STR$(PH),D0,U8,R
1260 FORR=1TO20:INPUT#2,D(R),E$(R),D%(R),E%(R):NEXT:INPUT#2,D$:DCLOSE#2
1270 D(32)=A(16)
1280 Z=0:FORR=1TO30:Z=Z+D(R):NEXT
1290 FORC=1TO20:D(32)=D(32)+D(C):NEXT
1300 IFABS(D(L))=>1THENE%(L)=53-LEN(STR$(INT(ABS(D(L)))))
1310 IFABS(D(L))<1THENE%(L)=52
1320 PRINT"[CLR][CTLN][YEL][REV][SP29]♠──┌╭/|♠/| ╲╲╲[SP37][ROF]":REM ACCOUN
TANT III
1330 PRINTSPC(5)"[CTLN][LGRN][CD]─HEQUE & ─ASH ♠CCOUNT"SPC(16)"─ATE:[LBLU][
SP2]"DD$
1340 A=0:B=0
1350 PRINT: FORR=1TO10
1360 A=B+1:B=A+1:PRINTSPC(6)"[BLU]"A"."E$(A)""TAB(31)"£ "TAB(D%(A))D(A)""TA
B(41)""B"."E$(B)'[SP4]"TAB(66)"£ "TAB(E%(B))D(B):NEXT
1370 IFFNR(Z+A(16))=<0.01THENPRINTSPC(42)"[CD]|♠L♠/─▔ ┌─ ♠──┌╭/|[SP6]£"TAB(
D%(32))"[RED]"D(32):GOTO1390
1380 PRINTSPC(42)"[GRN][CD]|♠L♠/─▔ ┌─ ♠──┌╭/|[SP6]£"TAB(D%(32))D(32)
1390 IFK=1THENRETURN
1400 PRINT"[HOM]"
1410 PRINTSPC(5)"[PUR][CD14]|RANSACTION ( |//)"
1420 GETKEYQ$
1430 IFQ$="Y"THEN1450
1440 IFQ$="N"THENGOTO1640
1450 T=T+1:IFT=>1THEND$=DD$
1460 PRINTCHR$(14)
1470 INPUT"[CR5][CD]─HEQUE/─ASH ♥LIP /O. (☆☆XXX)";E$
1480 INPUT"[CR5]♠MOUNT";D
1490 INPUT"[CR5]╲NTO ●HICH ♥LOT";L
1500 IFL>30ORL<1ORL-INT(L)>0THEN1460
1510 D(32)=FNR(D(32)-D):D(L)=FNR(D(L)-D)
1520 E$(L)=E$
1530 IFABS(D(L))=>1THEND%(L)=23-LEN(STR$(INT(ABS(D(L)))))
1540 IFABS(D(L))<1THEND%(L)=22
1550 IFABS(D(L))=>1THENE%(L)=53-LEN(STR$(INT(ABS(D(L)))))
1560 IFABS(D(L))<1THENE%(L)=52
1570 K=0:K=1:GOSUB1320
1580 Z=0:FORR=1TO30:Z=Z+D(R):NEXT
1590 IFFNR(Z+A(16))=<0.01THENPRINTSPC(42)"[CU]|♠L♠/─▔ ┌─ ♠──┌╭/|[SP6]£"TAB(
D%(32))"[RED]"D(32)
1600 PRINTSPC(5)"[PUR][CU]|RANSACTION ( |//)"
```

```
1610 GETKEYQ$
1620 IFQ$="Y"THEN1450
1630 IFQ$="N"THENGOTO1640
1640 PRINTSPC(5)"[CD]-O |OU ●ISH |O ♥AVE |HIS -ATA?":GETKEYX$
1650 IFX$="N"THENGOSUB1830
1660 PRINTTAB(5)"┐RESS ♠NY ╱EY |O ♥AVE -ATA."
1670 GETKEYX$
1680 DOPEN#2,"@CASHBOOK " +STR$(PH),D0,U8,W
1690 P$=CHR$(13):FOR R=1TO20:PRINT#2,D(R);P$;E$(R);P$;D%(R);P$;E%(R);P$:NEX
T
1700 PRINT#2,D$;P$
1710 DCLOSE#2
1720 PRINTSPC(5)"[GRN][CD]|AD "T" |RANS[SP8]/EW -ILE -ONE"
1730 PRINTSPC(5)"-O ●ISH ANOTHER |RANSACTION ( |/╱)":GETKEYX$:GOTO1830
1740 PRINTSPC(7)"[CD]┐RESS ♠NY ╱EY TO LOAD -ATA"
1750 PRINTSPC(7)"[CD]┐RESS ♠NY ╱EY TO LOAD -ATA"
1760 GETKEYX$
1770 RETURN
1780 PRINTSPC(52)"[CD]♥AVE |HIS -ATA? ( |/╱)":GETKEYX$
1790 IFX$="N"THENGOSUB1830:END
1800 PRINTTAB(52)"┐RESS ♠NY ╱EY |O ♥AVE -ATA."
1810 GETKEYX$
1820 RETURN
1830 REM INSTRUCTION ROUTINE
1840 IFDS=63THENPRINT"[GRN][CU7]ACCOUNTANT III HAS ALREADY BEEN INITIALIZED
.[SP3]PLEASE RERUN PROGRAMMME AGAIN BUT ANSWER (N) TO QUESTION":END
1850 PRINT"[CLR]":PRINTCHR$(142)
1860 IFT>0THENGOTO1880
1870 PRINTSPC(5)"[CD2]WELCOME TO ACCOUNTANT III. PLEASE SELECT THE MENU YOU
 WISH TO VIEW:"
1880 PRINTSPC(20)"[CD][LRED]╭────────────────────────────────────╮"
1890 PRINTSPC(20)"[LRED]|[LGRN] 1: MENU 1 : MOUNTHLY OUTGOINGS[SP5][LRED]|"

1900 PRINTSPC(20)"[LRED]|[LGRN] 2: MENU 2 : STANDING ORDERS[SP8][LRED]|"
1910 PRINTSPC(20)"[LRED]|[LGRN] 3: MENU 3 : CHEQUE & CASH ACCOUNT[SP2][LRED
]|"
1920 PRINTSPC(20)"[LRED]|[LGRN] 4: EXIT[SP28][LRED]|"
1930 PRINTSPC(20)"[LRED]|[SP36]|"
1940 PRINTSPC(20)"[LRED]|[SP36]|"
1950 PRINTSPC(20)"[LRED]|[SP36]|"
1960 PRINTSPC(20)"[LRED]|[SP36]|"
1970 PRINTSPC(20)"[LRED]╰────────────────────────────────────╯"
1980 PRINTSPC(22)"[YEL][CU3]GO AHEAD: "
1990 GETKEY W$
2000 IFZ>0THEN2020
2010 IFW$="3"THENPRINTSPC(17)"[CD5][LRED]THIS MENU IS ONLY ACCESSIBLE THROU
GH MENU 1":GOTO1990
2020 IFW$<"1" OR W$>"4"THEN1990
2030 IFW$="1"THENGOTO210
2040 IFW$="2"THENGOTO810
2050 IFW$="3"THENGOTO1240
2060 IFW$="4"THENSCNCLR:END
2070 PRINT"[CLR][CTLN][YEL][REV][SP32]♠─┌ ╱/| ♠/|  ╲╲╲[SP34][ROF]":REM ACCOUN
TANT III
2080 PRINT"[PUR][CD]♥| ♠/─╲/|  ┌_─‾_♥[SP37]-ATE:[SP3]"DD$
2090 PRINT:FOR R=1TO9:PRINT"[RED][SP3]"R" ."C$(R)"[SP2]"TAB(25)"£"TAB(C%(R)
)C(R)""TAB(38)"[LBLU]"[SP2]F$(R):NEXT
2100 FORR=10TO15:PRINT"[RED][SP2]"R" ."C$(R)"[SP2]"TAB(25)"£"TAB(C%(R))C(R)
""TAB(38)"[LBLU]"[SP2]F$(R):NEXT
2110 R=16:PRINT"[PUR][CD] |OTAL OF ♠LL ♥TANDING ┌RDERS IS £ " C(R)
2120 PRINT"[CD][YEL][REV][SP28]|Y ♠LAN[SP2]& _AY |ARBER[SP31][ROF][PUR]"
2130 RETURN
2140 INPUT"[CD6][CR11]WHICH MONTH IS REQUIRED: (JAN,FEB ETC.) ";M$
2150 IFM$="JAN"THENPH=1
2160 IFM$="FEB"THENPH=2
2170 IFM$="MAR"THENPH=3
```

```
2180 IFM$="APR"THENPH=4
2190 IFM$="MAY"THENPH=5
2200 IFM$="JUN"THENPH=6
2210 IFM$="JUL"THENPH=7
2220 IFM$="AUG"THENPH=8
2230 IFM$="SEP"THENPH=9
2240 IFM$="OCT"THENPH=10
2250 IFM$="NOV"THENPH=11
2260 IFM$="DEC"THENPH=12
2270 IFPH<1THENGOTO2300
2280 IFPH>12THENGOTO2300
2290 GOTO2310
2300 INPUT"[RED][CD][CR11]PLEASE RE-ENTER MONTH AS (JAN,FEB,ETC)";M$:GOTO21
50
2310 INPUT"[YEL][CD2][CR11]PLEASE ENTER TODAY'S DATE: (XX/XXX/XX) ";DD$
2320 FORK=4TO6
2330 IFASC(MID$(DD$,K,1))<65GOTO2360
2340 IFASC(MID$(DD$,K,1))>211GOTO2360
2350 NEXTK:GOTO2380
2360 INPUT"[CD][RED][CR11]RE-ENTER DATE IN XX/XXX/XX FORMAT";DD$
2370 GOTO2320
2380 CHAR1,31,20,"[GRN][CTLO]THANKYOU"
2390 RETURN
2400 INPUT"[CD][CR41]IS THIS THE FIRST RUN OF ACCOUNTANT III (Y/N)";ZZ$
2410 IF ZZ$="N"THENGOTO1830ELSE2420
2420 FORR=1TO16:A(R)=0:NEXT:D$=STR$(A)
2430 FOR PH=1TO12
2440 DOPEN#1,"ACCOUNTANT 1"+STR$(PH),D0,U8,W
2450 G$=CHR$(13):FOR R=1TO16:PRINT#1,A(R);G$:NEXT
2460 PRINT#1,D$;G$
2470 DCLOSE
2480 DOPEN#2,"CASHBOOK " +STR$(PH),D0,U8,W
2490 P$=CHR$(13):FOR R=1TO20:PRINT#2,D(R);P$;E$(R);P$;D%(R);P$;E%(R);P$:NEX
T
2500 PRINT#2,D$;P$
2510 DCLOSE#2
2520 NEXTPH
2530 DOPEN#1,"♥TANDING ┌RDERS ",W
2540 G$=CHR$(13):FOR R=1TO16:PRINT#1,C(R);G$;C$(R);G$;C%(R);G$;F$(R);G$:NEX
T
2550 PRINT#1,D$,G$
2560 DCLOSE#1
2570 GOTO1830
2580 FORR=1TO16:PRINTA(R):NEXT
```

★ Program Submission Procedure ★

DO NOT submit any program or routine that you do not either own or have property,authority to do so.

ALWAYS include your name, address and the date on all material and any enclosures.
Do not forget to make it clear exactly which computer/s your program or article is applicable to.

Include ROM or DOS versions wherever they are pertinent.

If you have to submit work which is hand-written then you must make sure it is printed clearly.

Number all pages.

Never use staples. Use paperclips if necessary.
If you are saving your program to tape then save it AT LEAST twice on each side.
When you save a program on disk save it twice and call the second file "BACKUP".

Remember to label all tapes and disks with your name and the title of the program. Label tape or disk with your name and the name or title of the program.

Always ensure that disks are well packaged. They should ideally be sent in a commercial disk mailer or at least packed between two pieces of hardboard or rigid plastic.

Please allow at least 8 weeks for acknowledgement as all programs have to be thoroughly tested and made into a suitable format.

Enclose a self-addressed stamped envolope or package if you would like your program to be returned.

★ Programming tips ★

If you can, use CHR$(x) type commands instead of those hard to read graphic symbols.
If necessary renumber your program on completion a many readers use auto number utilities to ease typing in.

Try to keep instructions within the program itself at a sensible level. You can expand on them within the accompany text if necessary.

TEST your programs before submitting them or even better get a friend to test them for you.

If a program contains machine code data please use decimal and not hex as there are fewer digits to be confused. Try and keep the same number of data statements in each line. Please add some form of error checking if your program contains more than five lines of data.

cont. on next page

Storm

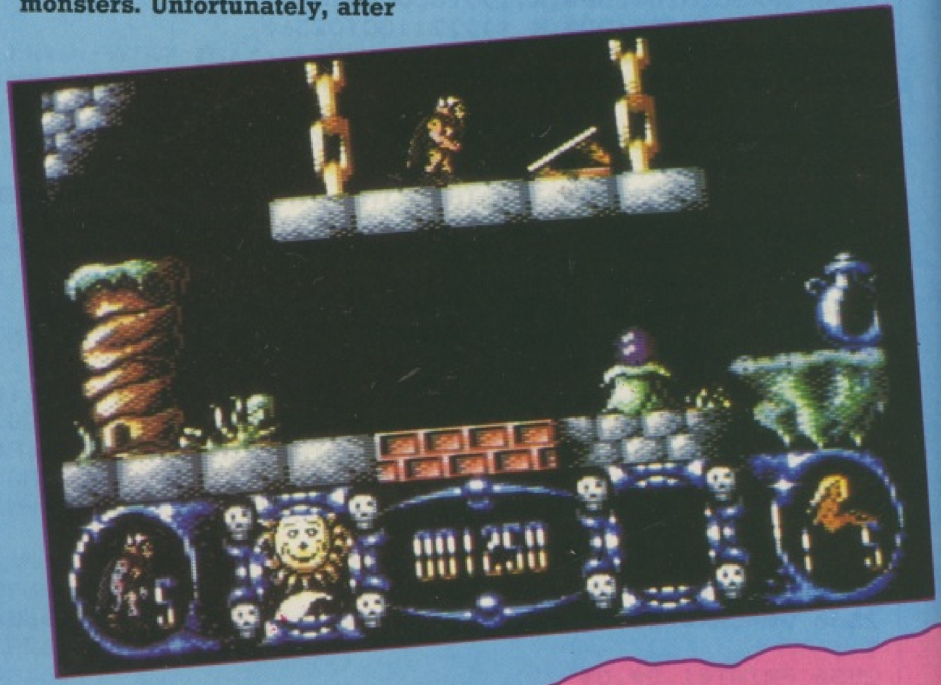
As more and more stunning graphics begin to appear in 16-bit games, their 8-bit brothers are having a real fight to keep up with them. This time last year, many respected figures in the computer industry were saying that the 64 had been pushed to its limits, that there was no further ground the 8-bit programmers could cover. The arrival of Stormlord shows, at least in the graphics stakes, just how wrong they were.

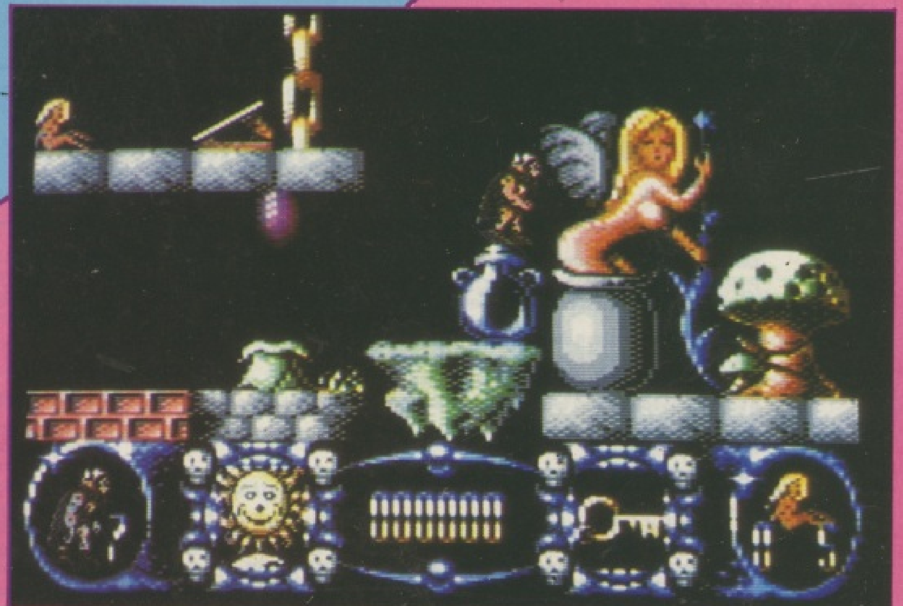
Stormlord, as well as being the name of the game, is the central character in this fantasy arcade adventure. This caped, squat barbarian-cum-sorcerer has found his country under siege from a wicked queen. She has rounded up the local fairy population and imprisioned them around the land. If no-one steps in, she will carry out her plans to destroy them all before taking power herself.

> ***"It seems the Queen's evil has already begun to take effect, as your once powerful homeland is now rife with crazed demons."***

As the fairies have all been locked up, rescuing them poses more than a few problems. It seems the Queen's evil has already begun to take effect, as your once peacful homeland is now rife with crazed demons. The flora has also sprung into poisonous life, so you will have to watch your step. Sighting the fairies on the horizontally scrolling levels is not too hard, but actually getting to them is. Most are hidden behind locked doors, or trapped in suspended enclosures. Unlocking doors is a simple matter of finding a key. Others can only be reached with the use of the spring-boards. These act as teleports, shooting you through the air to a predetermined destination.

Object manipulation comes into the game substantially. As there are only a few different objects to pick up, finding out what they are used for is no real problem. As for the baddies, the predictable bouncing balls are easy enough to avoid, as are the initial attacks from airborne monsters. Unfortunately, after the first couple of levels, those monsters start appearing in often overwhelming numbers.





Hewson

nlord

Between each level you get a chance to win an extra life. Fairies fly around above you, while you blow kisses at them. Any you manage to hit fall in love with you and drop a tear. If you can catch ten of these falling tears within the time limit you get your extra life.

> ***"An incredible use of colour in the background graphics has gone towards crafting some of the best scrolling screens ever seen."***

The gameplay is not particularly original, based around a traditional platform arcade adventure frame, but it really does the business when it comes to graphics. Stormlord is superbly drawn and animated with multi-colour hi-res sprites. An incredible use of colour in the background graphics has gone towards crafting some of the best scrolling screens ever seen. The toadstools, wine casks, lush greenery and the score panel are brilliant, and that curvy topless fairy is something else! There are no sound effects, which is a shame, but the soundtrack fills in well.

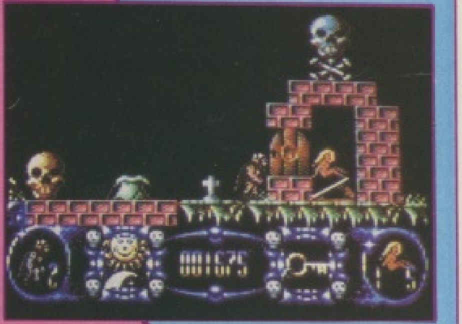
It is unfortunate that the difficuly level is stepped up so drastically in the later stages, as it detracts from an otherwise highly playable game. If you can bear that, Stormlord will serve you well. My only other reservation is that each game has to be played just as the last, and playing right through from scratch after dying on the fourth level may not go down too well. Decent arcade adventures have not been in abundance recently, and if just for the graphics, Stormlord deserves your attention (and probably your cash too).

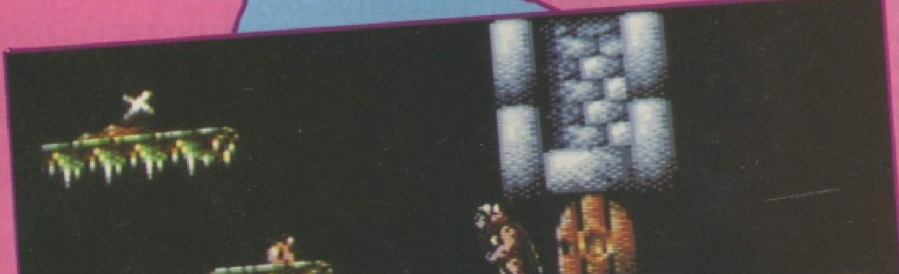
T.H.

Hewsonians ...
Stormlord was designed by Raffael Cecco in conjunction with Nick Jones. As was the case with Exolon and Cybernoids I and II, the game was originally developed for the Spectrum, with Nick Jones programming the 64 version. Hugh Bins supplied those gorgeous graphics, whilst the soundtrack was a joint venture from Jeroen Tel and Charles Deenen. Let's hope we have not seen the last from this successful team.

Graphics: *95%*
Sound: *80%*
Playability: *79%*
Overall: *81%*

Price: *£9.99 (c)*
£14.99 (d)





Digital Logic

Darren Yates

+4, C16, C128

We continue our powerful programming series with a simple tutorial on logic gates. A logic gate, hundreds of thousands of which your computer contains, responds to two levels of electrical voltage. These levels are the positive high voltage and zero-voltage (or ground), much the same as the two ends of a common battery. These are also called '1's and '0's. Simply type in this program to learn more!

```
1 REM ********************************
2 REM *    DIGITAL LOGIC COURSE I    *
3 REM *      DARREN YATES 1988       *
4 REM ********************************
5 GRAPHIC1,1:GRAPHIC0
6 COLOR1,2:COLOR0,2,4:COLOR4,1
7 PRINT"[CLR][CD6][SP6]BASIC DIGITAL LOGIC COURSE I[WHT]"
8 PRINT"[CD5]THIS COURSE WILL TEACH YOU THE BASICS OF"
9 PRINT" THE SIX MOST COMMON GATES AND HOW THEY"
10 PRINT"[SP7]WORK IN A PRACTICAL MANNER"
11 PRINT"[CD4][SP9]PRESS A KEY TO CONTINUE"
12 CIRCLE,50,50,6 :SSHAPELO$,44,44,56,56
13 PAINT,50,50:SSHAPEHI$,44,44,56,56
14 PAINT0,50,50
15 GETKEYAN$
16 GRAPHIC1,1:GRAPHIC0
17 PRINT"[CLR][CD2]THESE SIX GATES ARE:....."
18 PRINT"[CD2][SP2]1...NOT"
19 PRINT"[SP2]2...OR"
20 PRINT"[SP2]3...AND"
21 PRINT"[SP2]4...NOR"
22 PRINT"[SP2]5...NAND"
23 PRINT"[SP2]6...XOR[SP3](EXCLUSIVE-OR)"
24 PRINT"[CD4][SP10]PICK A GATE.....(1-6)"
25 GETKEYAN$
26 I1=0:I2=0
27 IFASC(AN$)<49ORASC(AN$)>54THEN25
28 ONASC(AN$)-48GOTO29,49,75,97,124,146
29 REM ** NOT **
30 COLOR1,1
31 DRAW1,120,20 TO120,100TO200,60TO120,20
32 CIRCLE,203,60,3
33 DRAW,120,60TO56,60:DRAW,206,60TO256,60
34 COLOR1,2
35 GSHAPEHI$,43,54
36 GSHAPELO$,256,54
37 GRAPHIC1:CHAR,16,15,"NOT GATE"
38 CHAR,1,17,"THE OUTPUT IS THE OPPOSITE OF THE INPUT"
39 CHAR,1,18,"I.E IF THE INPUT IS HIGH (LIGHT ON),THE"
40 CHAR,6,19,"OUTPUT IS LOW (LIGHT OFF) ETC"
41 CHAR,4,21,"PRESS <1>..CHANGE INPUT"
42 CHAR,4,22,"[SP6]<RETURN>....RETURN TO MENU"
43 GETKEYC$:IFC$="1"THEN45
44 IFC$=CHR$(13)THENGRAPHIC1,1:GRAPHIC0:GOTO25
45 CN=NOT(CN)
46 IFCN=-1THENGSHAPELO$,43,54:GSHAPEHI$,256,54
47 IFCN=0THENGSHAPEHI$,43,54:GSHAPELO$,256,54
```

```
48 GOTO43
49 REM ** OR **
50 COLOR1,1
51 CIRCLE,80,60,30,,30,150
52 DRAW,95 ,34TO160,34
53 CIRCLE,161, 94,60,,0,55
54 DRAW,95 ,86TO164.86
55 CIRCLE,161, 26,60,.125,'80
56 DRAW,60,45TO105.45
57 DRAW.60.75TO105.75
58 DRAW.209,60TO250,60
59 COLOR1,2
60 GSHAPELO$,47,40:GSHAPELO$,47,70
61 GSHAPELO$,250,54
62 GRAPHIC1
63 CHAR1,16,14,"OR GATE"
64 CHAR,0,16,"THE OUTPUT IS HIGH IF ONE OR MORE OF THE"
65 CHAR,0,17,"[SP5]INPUTS IS HIGH ELSE IT IS LOW"
66 CHAR,0,19," PRESS <1> OR <2> TO CHANGE THE INPUTS"
67 CHAR,0,20,"[SP7]<RETURN> TO MENU"
68 GETKEYZ$:IFZ$=CHR$(13)THENGRAPHIC1,1:GRAPHIC0:GOTO25
69 GOSUB171
70 OT=I1ORI2
71 IFI1=0THENGSHAPELO$,47,40:ELSEGSHAPEHI$,47,40
72 IFI2=0THENGSHAPELO$,47,70:ELSEGSHAPEHI$,47,70
73 IFOT=0THENGSHAPELO$,250,54:ELSEGSHAPEHI$,250,54
74 GOTO68
75 REM *** AND ***
76 COLOR1,1
77 DRAW,100,20TO100,80TO180,80
78 CIRCLE,174,50,30,,10,170
79 DRAW,100,20TO180,20
80 DRAW,100,32TO50,32:DRAW,100,65TO50,65
81 DRAW,205,50TO260,50
82 COLOR1,2:GSHAPELO$,45,27:GSHAPELO$,45,60
83 GSHAPELO$,260,45:GRAPHIC1
84 CHAR,16,14,"AND GATE"
85 CHAR,0,16,"[SP2]THE OUTPUT IS HIGH ONLY IF BOTH THE"
86 CHAR,0,17,"[SP13]INPUTS ARE HIGH"
87 CHAR,0,19,"[SP2]PRESS <1> OR <2> TO CHANGE THE INPUTS"
88 CHAR,0,21,"[SP8]<RETURN> TO RETURN TO MENU"
89 GETKEYZ$
90 IFZ$=CHR$(13)THENGRAPHIC1,1:GRAPHIC0:GOTO25
91 GOSUB171
92 IFI1=0THENGSHAPELO$,45,27:ELSEGSHAPEHI$,45,27
93 IFI2=0THENGSHAPELO$,45,60:ELSEGSHAPEHI$,45,60
94 OT=I1ANDI2
95 IFOT=0THENGSHAPELO$,260,45:ELSEGSHAPEHI$,260,45
96 GOTO89
97 REM ** NOR **
98 COLOR1,1
99 CIRCLE,80,60,30,,30,150
100 DRAW,95 ,34TO160,34
101 CIRCLE,161, 94,60,,0,55
102 DRAW,95 ,86TO164,86
103 CIRCLE,213,60,3
104 CIRCLE,161, 26,60,,125,180
105 DRAW,60,45TO105,45
106 DRAW,60,75TO105,75
107 DRAW,217,60TO250,60
108 COLOR1,2
109 GSHAPELO$,47,40:GSHAPELO$,47,70
110 GSHAPEHI$,250,54
111 GRAPHIC1
112 CHAR1,16,14,"NOR GATE"
113 CHAR,0,16,"THE OUTPUT IS HIGH ONLY WHEN BOTH INPUTS[SP18]ARE LOW"
```

cont. on next page

```
114 CHAR,0,18,"PRESS <1> OR <2> TO CHANGE THE INPUTS"
115 CHAR,0,20,"[SP6]<RETURN> TO RETURN TO MENU"
116 GETKEYZ$
117 GOSUB171
118 IFZ$=CHR$(13)THENGRAPHIC1,1:GRAPHIC0:GOTO25
119 OT=ABS(NOT(-(I1ORI2)))
120 IFI1=1THENGSHAPEHI$,47,40:ELSEGSHAPELO$,47,40
121 IFI2=1THENGSHAPEHI$,47,70:ELSEGSHAPELO$,47,70
122 IFOT=1THENGSHAPEHI$,250,54:ELSEGSHAPELO$,250,54
123 GOTO116
124 REM *** NAND ***
125 COLOR1,1
126 DRAW,100,20TO100,80TO180,80
127 CIRCLE,174,50,30,,10,170:CIRCLE,208,50,3
128 DRAW,100,20TO180,20
129 DRAW,100,32TO50,32:DRAW,100,65TO50,65
130 DRAW,212,50TO260,50
131 COLOR1,2:GSHAPELO$,45,27:GSHAPELO$,45,60
132 GSHAPEHI$,260,45:GRAPHIC1
133 CHAR,16,14,"NAND GATE"
134 CHAR,0,16,"[SP2]THE OUTPUT IS LOW WHEN THE INPUTS ARE"
135 CHAR,0,17,"[SP4]HIGH OTHERWISE THE OUTPUT IS HIGH"
136 CHAR,1,19,"PRESS <1> OR <2> TO CHANGE THE INPUTS"
137 CHAR,1,21,"[SP6]<RETURN> TO RETURN TO MENU"
138 GETKEYZ$
139 IFZ$=CHR$(13)THENGRAPHIC1,1:GRAPHIC0:GOTO25
140 GOSUB171
141 IFI1=0THENGSHAPELO$,45,27:ELSEGSHAPEHI$,45,27
142 IFI2=0THENGSHAPELO$,45,60:ELSEGSHAPEHI$,45,60
143 OT=ABS(NOT(-(I1ANDI2)))
144 IFOT=0THENGSHAPELO$,260,45:ELSEGSHAPEHI$,260,45
145 GOTO138
146 REM ** XOR **
147 COLOR1,1
148 CIRCLE,80,60,30,,30,150:CIRCLE,70,60,30,,30,150
149 DRAW,95 ,34TO160,34
150 CIRCLE,161, 94,60,,0,55
151 DRAW,95 ,86TO164,86
152 CIRCLE,161, 26,60,,125,180
153 DRAW,60,45TO 95,45
154 DRAW,60,75TO 95,75
155 DRAW,209,60TO250,60
156 COLOR1,2
157 GSHAPELO$,47,40:GSHAPELO$,47,70
158 GSHAPELO$,250,54
159 GRAPHIC1
160 CHAR1,16,14,"XOR GATE"
161 CHAR,0,16,"THE OUTPUT IS LOW IF THE INPUTS ARE THE"
162 CHAR,0,17,"SAME & HIGH IF THE INPUTS ARE DIFFERENT"
163 CHAR,1,19,"PRESS <1> OR <2> TO CHANGE THE INPUTS"
164 CHAR,1,21,"[SP6]<RETURN> TO RETURN TO MENU"
165 GETKEYZ$:IFZ$=CHR$(13)THENGRAPHIC1,1:GRAPHIC0:GOTO25
166 GOSUB171
167 IFI1=1THENGSHAPEHI$,47,40:ELSEGSHAPELO$,47,40
168 IFI2=1THENGSHAPEHI$,47,70:ELSEGSHAPELO$,47,70
169 IFI1<>I2THENGSHAPEHI$,250,54:ELSEGSHAPELO$,250,54
170 GOTO165
171 REM *** SUBROUTINE ***
172 IFZ$="1"THENI1=ABS(NOT(-I1))
173 IFZ$="2"THENI2=ABS(NOT(-I2))
174 RETURN
```

CLASSIFIED

C64 new — still boxed. 1541C disk drive. Brother HR15 printer. Numerous games cartridges and books. Bargain £250 Phone 01 883 3218.

C64 & disk drive & games, freeze frame, cassette player, discs tapes, joystick, about £650 new £275 ono. Ring Egham 31829.

Loads of C64 C16/+4 software for sale. All original and in very good condition. SAE for list. Andrew,/ Broomcotts, Ferryhill, Co Durham, DL17 8AY.

Amiga penpals wanted to swap games, demos etc. All letters will be answered. Send lists, disks etc to Robert, Sudurgotu 75, 220 Hafnarfjordur, Iceland.

Amiga conts. wanted. Write to: GE1R Arne Rimala, Sigrid Undsetsve 1, 0669 Oslo Norway.

1250 superpokes for a lot of games. Infinite lives for only £3. Send it to: Francisco Exposito — Avda Carlos V24-28936 Mostoles (Madrid) Sapin.

Dolphin DOS for CBM64 plus Dolphin copy disk plus user port expander. Fully tested and working. All £50 01 590 2792.
Star LC10 Colour printer (Centronics) with Amiga lead, two colour, four black ribbons all boxed £200 01-590 2792.

An Amiga freak is looking for new contacts. Grab a pen and write to: Andreas Bjornhaug Minku 17 N8500 Narvik Norway.

Amiga: Penpals wanted from all over the world. Send letters and disks to: Bob Dewitt 13347 Rexford, Blue Island, IL 60406 USA.

Commodore 128 Computer D/Drive 1541 plus 1101 Printer — daisy wheel and Datasette plus some software £450. Aldershot 313868.

Honest and reliable contacts wanted by C64 disk owver. Contact Paul Young, 30 Godric Rd., Sheffield S5 0AJ. All letters answered and all disks returned.

Wanted C64 Printer, cheap please for OAP. Must be working. Phone Jack 0621 892437 Maldon, Essex.

CBM64, dot matrix printer, datasette, joystick, over £400 worth of games, over 50 magazines, manuals & Spectrum and games. All worth over £1000. Sell £399. Tel. (0202) 690966.

C128/69 1570 Assembly and Basic Programmer seeks penpals from all over the world. Male or Female, any age. All letters will be answered. Write to: Kristian, Kiviportintie 9, 00950 Helsinki, Finland.

C16/+4 users contact me D Edwards 28 Central Avenue, Chadsmoor, Cannock, Staffs. WS11 2JW. 100% reply. Software, hardware, hints and tips. Software for sale. C16/+4 Users Group.

64 & 128 Twin version Abacus Cobol: Disk. Ideal learnign environment, very comprehensive. Cost £30 sell £15 (Brand new unused). paul 0202 520070.

C64 Computer, disk drive, cassette drive, loads of games, software, and more £300 Phone Andy, Day 01-992 2492, Evenings 01- 993 3166.

C128, Excellerator plus disk drive, MPS 801 printer, datasette, two joysticks and lots of games. Will split. Open to offers. Phone 0602 724228. Ask for Jason.

For Sale. C64, C2N, 1541 disk drive, £200 worth of software, joysticks, mags, replay cartridge, Sell for £300 ono Phone Robert on Portsmouth (0705) 469764.

CBM64, disk drive, two cassette recorders, backup lead, Action Replay, + Expert cartridge, 170+ games, loadsa utilities, peripherals, magazines & much, much more. Bargain £200. For full details Phone Simon 01-642 3665.

HERE'S MY CLASSIFIED AD . . .

(Private Readers — Free-Max 32 words)
Trade Advertisements — 50p per word

I make this______words at ______ p per word, so I enclose £ ______

Please continue on a separate sheet of paper for trade advertisements

Name

Address

Tel:

Send your classified entries to:
Classified Department,
Commodore Computing International Magazine.
40 Bowling Green Lane, London EC1R ONE
Tel: 01-278 0333 Ext.280

CLASSIFIED

C64 contacts wanted. Disk ony! Send lists and or disks to: Espen Ottar Tarnbyn U7, 2013 Skjetten, Norway. All letters will be answered.

CBM28 Music Maker: Disk Version. Keyboard overlay, music maker progrm, keyboard Tutor, cost £25, sell £12 inc P&P (as new). Paul 0202 520070.

CBM 64 Music Synthesiser Software: Cassette Version. 'The Music Studio' £4 and 'Sound Studio' £6 (both excellent). Also Datel Com-drum: Hardware and Disk software £7. paul 0202 520070.

C128D, M PS 803 Printer, listing paper, 1901 colour monitor, modem, tape deck, swivel stand, mouse, screen vision master, extra leads, £500. Bargain! Phone Bilal 01 589 0104.

C.V.'s on your Micro. Layout tips and examples of C.V.'s £7.50 inc P&P TOD Glass, Wellbrae Court, New Elgin, Moray, Scotland, IV30 3JL.

C64 Owner looking for contacts. Write to: Juan Cavvasco Romero Plaza, Neptumo Y 111000 San Fernandez (Cadiz) Spain.

Amiga & 64 owner wishes contact users worldwide, all letters answered. Write to Nigel Stwart, PO box 1351, Booragoon, Perth, Western Australia, 6154.

C64 Penpals and users wanted all over the world. Please write to A Chung C/O Lai Tong PObox 34 Port-Louis, Mauritius, Indian Ocean.

Amiga contacts wanted around the world. Disks = answer. Write to Jan Roger Wilkins. Bjorke-Veien 1. 4875 Nedenes, Norway. Tel. 041 96747.

Bards tale party. Two archmages, three fighters and a bard. All 70+ levels. 50p plus blank tape to SM Jackson, 28 School Lane, Rainhill, Mside L35 6NS.

Desperately Wanted: RAM chip for Action Replay III Diskmaster or Action Replay IV (not professional) Alf Jonassen, Fjellvegen, 16A N-4300 Sandnes, Norway.

Super Offer: C64 Computer & 1541 Disk Drive, Colour Monitor, Tape unit, Joystick, Printer, Games, Superbase 64, Utilities, Wordprocessor, Flight Simulator II, Music Maker, Super Books and magazines. In perfect condition £750. Phone Iklil 370 7735.

Amiga 2000, 1MByte, 1081 colour monitor, 2 drives, Epson LX800 printer, lots of manuals, some software, hardly used, £1050 or nearest offer. Tel Adam (0932) 858852.

Amiga contacts wanted. Write to Julip Espinossa Mercado St FCO HDE2 Cuerra, 8-70 C-35014 Las Palma, Spain. Send lists or disks.

For Sale CBM64, 1541, MPS801, Final Cartridge, Expert Cartridge. Modem, Tape, 2 Joysticks, Mouse, £1000 + of Software, many Books, & Mags. Sell for £300. Tel Hans, (0932) 63035.

For Sale: Commodore 64, 1541 Disk Drive and Star SG-10c Printer. Various software including Geos and Easy Script with books and manuals. Boxed VGC, bargain at only £29 ono. Phone Bagshot (0276) 72873.

C64 M/C or basic programs or routines, no matter what size I'll program them. SAE for details to Sam Sherwin, The Flat, 38 Military Rd, Colchester.

Wanted: Commodore Plus/4 Programmers Reference Guide. Telephone: (0709) 868497. Ask for Paul.

Games for Sale C64 and C128 games. Worth £100 — Platoon, Speed King and many more for only £50. Tel Surjit, (0784) 251101 now!

For Sale Commodore MPS 801 Printer £40. Contact Rich. (0400) 61833 Cranwell, Lincs.

Commodore 16 Pluse 4 games £3 each. Write to 139 St Lawrence Rd Tinsley, Sheffield, S9 7SE.

Fame the new game for everybody. 30 tablets with natural emblems. More details Otad, 81 Walkford Way, North Peckham. London SE15 6EY. Tel. 01-701 5239.

Amiga users wanted all over the world. Send to PO box 503, Modburg 5092, South Australia or ring Australia (08) 263 1446 ask for Dave.

Wanted Plus 4 users for exchange of information, PD programs and other throughout the world. I will answer to all. I'm an 18 year old Italian boy. Write to Claudio Verniani, 10 Fossolo, Bologna 40138, Italy.

For Sale Commodore 64/128 Midi Digital Sampler on disk £25 ono. A Riddell, 28 Glenkyle Park, Carrmoney, Co Antrim BT36 6SP.

Amiga contacts wanted. All letters answered. Write to Max, 34 Cabra, Three Mile House, Monaghan, Ireland.

For sale C64, Disk Drive, MPS801, Music Expansion, Midi Interface, Digidrum, Dolphin DOS, Freeze Frame, lots of software, £450, will split. Herne Bay, (0227) 364152 Evenings.

CBM64 for sale with datasette, joystick, Neos mouse and cheese books and over £180 worth of games. Sell £195. Tel. Winkfield (0344) 884138 after 5 pm.

C64 owner seeking penpals abroad. Send letters on disk to: Larry Fricia, 820 Henderson Ave, 6B, Staten Island, N.Y. 10310, USA.

Amiga contacts wanted. Fast reply. Send list or disks to: 55 Cecil St., Liverpool 15, L15 1HP.

C128 Warranty 1991, 1541c, 1531, Replay MKV, tapes, cassettes, joystick £275. Ring D Porter. 04024 41843.

C64 Games for sale. All originals boxed with instructions. Cassettes from £1 each. Esiks from £2. Send SAE for list. I Dalziel 7 Walker Avenue, Troon, Ayrshire.

C64 contacts wanted. Write to: Niklas Bark, Lerbrannargatan 3A, 431 48 Molndal Sweden.

As new, boxed C64, 1541DD, C2N Datasette, GP100A dot matrix printer, software — Mini Office, Easy Script, Easy File, Machine Code Tutor, books, Program manuals etc £265 Phone 1357 21831.

UK 64 ownere want contacts in Europe. Send disks or lists. All letters will be answered. Gary Broadhead, 132 Balfour St., Oldham, Lancs, OL4 1NS.

COMMODORE

MAGENTA PAGES

COMMODORE 64/128 SOFTWARE LIBRARY

- ★ *Free Membership*
- ★ *Tapes from 75p to £1.50*
- ★ **Regular update of new games**
- ★ *All originals*
- ★ *Disc £2*
- ★ *7 days hire*

Send now for free catalogue   Also on Amiga and Atari St

B.J.L. SOFTWARE LIBRARY
16 Sarum Avenue, Melksham, Wilts SN12 6BN

·R·E·P·A·I·R·S·

★ FULLY INCLUSIVE PRICES ★ 12 MONTHS WARRANTY ★

C64	£25.00	C64C	£28.00
C128	£30.00	C+4	£25.00
C16	£20.00	1541 (Logic Flts.)	£25.00

AMIGA £50.00 (Excludes D/Drive Replacement)
Monitors and Printers – Quotation *Trade Enquiries welcome*

MIDLAND COMPUTER REPAIR SERVICES
DEPT CCI, UNIT 1, THE OLD DAIRY, NORTH ST., MELTON MOWBRAY, LEICS. LE13 1NL. TEL: (0664) 410148

Disks, double sided, bulk, price per 25 of :

3½″ 135tpi	£22	5¼″ 48tpi	£8

Printer ribbons, fabric, black, price per 30 of :

4023 m/s	£9	VIC 1515	£7
Citizen 120D	£12	VIC 1525	£7
Epson FX80	£12	Star NL10	£14
MPS 801	£9	Star LC10	£15
MPS 803	£9		

COMPUTER IMAGES

15 Grove Market Place, Eltham, London SE9
Telephone 01 850 3883

All prices include VAT & delivery

PUBLIC DOMAIN LIBRARY

AMIGA PROGRAMMES FROM £2.00

S.A.E. FOR CATALOGUE
send to

EXMOUTH MICROS
15 SOUTH STREET, EXMOUTH,
DEVON EX8 2SX TEL 0395 267734

NO MEMBERSHIP FEES – NO POSTAGE – NO HASSLE

Guaranteed Disks

3·5″ DS/DD
86p each
(Standard Bulk)

97p each
(MAXELL/KAO BULK)
Recommended for the Amiga, ARC, MAC, etc

5·25″ 48 tpi DS/DD
37p each
many more types & brands
We will beat any Price
Amiga PD Lib
£2.50/Disk Send SAE

DISK BOXES, AMIGA A500 & 2000 SYSTEMS
All prices include VAT & Delivery
Quantity discounts on 100 + DISKS

0705 511439 (24hr)
0705 511648 (Amiga Systems)
0705 511646 (FAX)

Cheques/P.O. to:
Athene Consultancy
Dept CCI, The Media Centre
16 Stoke Rd, Gosport, Hants PO12 1JB

WIN ★ WIN ★ WIN ★ WIN ★ WIN ★ WIN

–THE EDGE–

Horse race predictor for the Commodore 64. Bet like the professionals with **"The Edge"** over bookies. Rates any horse race in minutes using information from daily newspapers.

These are just a few of the winners predicted in the first week in May.

May 1st. **Ndita** won at 5-1 at Wolverhampton.
May 2nd. **Evening Rain** won at evens at Hamilton.
May 5th. **Silks Princess** won at 15-8 at Hamilton.
Phantom Singer won at 100-30 at Newmarket.
Dream of Fame won at 10-1 at Nottingham.

and on May 9th 1989 **The Edge predicted an incredible 6 out of 6 winners** at Chepstow.

only **£9.95** for cassette and **£11.95** for disc.

Send your orders to:
Perfect Promotions, 20 Plym Walk, Newport, Gwent NP9 6EE.

Versions for other computers available soon. Send for details.

TBBCS Bulletin Board

Become a sysop for less

If you have an Amiga with two drives and a Hayes compatible modem, you could be running your own bulletin board for only 35 pounds!

TBBCS will let you build up a BBS with messages, voting, a dating service, SIGs, downloads, and a CB Simulator for less than the price of most Comms Packages. If you don't have your own phone line, TBBCS can share a voice line.

Send an SAE to the following address for more information.
Hugh Allan Jr, Ness Castle, Dores Rd, Inverness IV1 2DJ

★ Stop ringing other peoples bulletin boards, and start running your own. ★

Whilst all reasonable precaution is taken to ensure advertisers are bona fide, Croftward Publishing Group takes no responsibility for any misrepresentation or inaccuracies in advertisements or for any breaches of obligations by advertisers. Readers are recommended to take appropriate professional advice before entering into obligations.

COMMODORE

MAGENTA PAGES

TECHNOLOGY CITY

REPAIRS & SPARES

Amstrad Business Centre & Commodore Premier Dealers

Visa Fixed Prices Access

Quick Return

ALL WORK GUARANTEED

Cheque Orders: 0267 235099 P/Order

Carmarthen, Dyfed.

HINDLEY ELECTRONICS

The Computer repair specialists

SAME DAY SERVICE (CALLERS)

FAST

24Hr TURNAROUND (POSTAL)

SPECIAL OFFER 20% OFF REPAIR CHARGES WITH THIS ADVERT!

EXPERT COMPUTER REPAIRS

COMMODORE - SINCLAIR - AMSTRAD - ACORN - BBC

STANDARD CHARGES

(INC VAT AND FULLY INSURED RETURN POSTAGE)

Commodore 64 .... £25.00
Commodore +4.......... £25.00
1541 disc drive £32.50
Spectrum 48k £18.00
Commodore 64C.......... £29.00
Commodore vic 20.....£18.00
(OTHER DRIVES REPAIRED. RING FOR DETAILS)
Spectrum + 2 .... £25.00
Acorn Electron.......... £23.00
Commodore 128 .... £32.00
AMIGA 500.......... £35.00
Amstrad cpc 464 ....£25.00

3 MONTHS "NO QUIBBLE" WARRANTY ON ALL REPAIRS

SPARES - SPARES - SPARES

Low Prices E.G Spectrum 48K Membrane £3.99 Spectrum+ £6.99 Low Prices

COMPUTER ICS and GENERAL COMPONENTS

WHY PAY MORE

(Send Large SAE For Full Lists)

VISA

HINDLEY ELECTRONICS

Dept CCI, 97 Market Street, Hindley, Wigan WN2 3AA Tel (0942) 522743

Computer repairs. Callers requiring same day service please ring before calling and add 10% to standard charge. Standard charges do not include repairs to external items E.G power units tape recorders joysticks etc. A surcharge may be levied for machines that have sustained severe damage E.G fire flood tamper

---

ADRIAN'S ARCADE

THE COMMODORE SPECIALISTS

64, 128 and AMIGA

Exciting range of software for HIRE

HARDWARE: Attractive Discounts

i.e. Amiga + 1084 colour monitor £570

SOFTWARE: ALL machines 25% Discount

Details: Large SAE to

7 Woodley Headland, Peartree Bridge,
Milton Keynes, MK6 3PA

MAKE YOUR COMMODORE EARN!

Yes making money becomes incidental when you know how. Your micro is, if only you knew it, a gold mine. The size and make is irrelevant. Make the initial effort. NOW by starting your own **HOME BASED BUSINESS.**

This may be the most important move you will ever make!

REMEMBER: You'll never get rich by digging someone else's "ditch". Anyone in the country, including YOU, can become very rich in a relatively short period of time just be doing a few basic things! It's more rewarding than playing games. The benefits are many and varied. Full or part-time. For **FREE** details send S.A.E. to:

HOME BASED BUSINESS

31 PILTON PLACE (CCI 9)
KING AND QUEEN STREET
WALWORTH, LONDON SE17 1DR

COMMODORE SUPPLIES

C64 Power supply	£19.95
CBM Plus 4 Power supply	£29.95
C16 Power supply	£12.95
1530 Datasette	£27.95
1531 Datasette	£27.95
Serial lead (for d/drive/printer)	£5.95
Dust cover (please state computer)	£3.50
Simons Basic Extension	£9.95
Commodore 64 (working unit)	£55

Prices include VAT & PP. Allow up to 14 days for delivery. Chq/PO to: Omnidale Ltd, Code C2 23 Curzon Street, Derby DE1 2ES. Tel: 0332 291219

PUBLIC DOMAIN SOFTWARE for the C64/128.

We have 150 disks full of all types of Programs.

All disks are £2.95 each.

AVAILABLE NOW FOR THE +4

Send SAE or phone for free catalogue (state model)

Kingsway Computer Services

Dept C7 140 Rushdale Road, Sheffield
S8 9QE Tel: (0742) 588429

COMMODORE 64/128 SOFTWARE LIBRARY

★Free membership
★7 day hire
★Tapes from £1.00 to £1.50
★Up to 25% Off software
★10% Off hardware
★Newsletter every month
★Competitions
★Disk from £1.50 to £2.00

For free catalogue s.a.e. to:

ACE SOFTWARE LIBRARY
14 Chippendale Court, Finaghy,
Belfast BT10 0DU

AMIGA SOFTWARE LIBRARY

TRY SOFTWARE BEFORE YOU BUY

Large selection of titles available from £2. 10 days hire. Public Domain programs at £2.

Send S.A.E. for free list to:

DEPT CCI: PO Box 155
Cardiff CF5 4YA

SPARES REPAIRS SALES

all makes of computers & peripherals

Fast Reliable Guaranteed Service

Contact Dave Barber I. Eng., AMIERE

db ELECTRONIC SERVICES

205 Meadgate Avenue, Gt. Baddow,
Chelmsford, Essex. CM2 7NJ
Tel: 0245 - 260874

COMMODORE REPAIRS

(with FREE extended guarantee)

COMMODORE 64	£28.70
COMMODORE 128	£36.70
COMMODORE C16/+4	£20.70
COMMODORE AMIGA	P.O.A.

Price is all inclusive and we guarantee the whole computer for six months

KPR MICRO

34, Petunia Crescent, Springfield,
Chelmsford, Essex CM1 5YP
Tel: 0245 - 468554

TO SET THE PACE

FILL THIS SPACE!

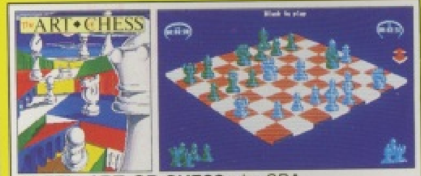
CALL 01-278 0333 EXT 280

OOO NOW!

FREE! TENSTAR PACK WORTH OVER £229!

FREE! - **AMEGAS** - by Players

FREE! - **INSANITY FIGHT** - by Microdeal


FREE! - **ART OF CHESS** - by SPA

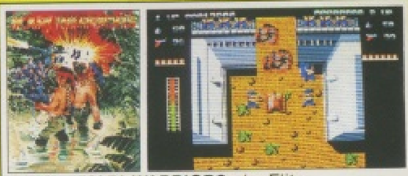
FREE! - **MERCENARY COMP** - by Novagen

FREE! - **BARBARIAN, ULT WARRIOR** - by Palace

FREE! - **TERRORPODS** - by Psygnosis

FREE! - **BUGGY BOY** - by Elite

FREE! - **THUNDERCATS** - by Elite


FREE! - **IKARI WARRIORS** - by Elite

FREE! - **WIZBALL** - by Ocean

Commodore AMIGA

ONLY £3.34 PER WEEK
RETURN COUPON FOR DETAILS

£346.95 +VAT= £399

INCLUDES FREE UK DELIVERY

The Amiga 500 is one of a new breed of technologically advanced computers, which are now emerging as the new standard for home computing, based around the new Motorola 68000 chip. The A500 has 512K RAM and a 1Mbyte double sided disk drive built-in. It can be connected directly to a wide range of monitors, or to a domestic TV set through a TV modulator. Designed with the user in mind, the A500 features a user friendly WIMP environment and comes supplied with a free mouse. And, when you buy your Amiga from Silica Shop, the UK's No1 Amiga specialists, you will experience an after sales service that is second to none, including a technical support helpline and free newsletters and price lists. Return the coupon below for our current information pack, which will give details of the Silica service and the very latest Silica Amiga offers. E&OE.

WHY SILICA SHOP?

Before you decide when to buy your new Commodore Amiga computer, we suggest you consider very carefully WHERE you buy it. There are MANY companies who can offer you a computer, a few peripherals and the top ten selling titles. There are FEWER companies who can offer a wide range of products for your computer as well as expert advice and help when you need it. There is ONLY ONE company who can provide the largest range of Amiga related products in the UK, a full time Amiga specialist technical helpline and in-depth after sales support, including free newsletters and brochures delivered to your door for as long as you require after you purchase your computer. That one company is Silica Shop. We have been established in the home computer field for ten years and can now claim to meet our customers requirements with an accuracy and understanding which is second to none. Here are just some of the things we can offer you:

THE FULL STOCK RANGE: The largest range of Amiga related peripherals, accessories, books and software in the UK.

AFTER SALES SUPPORT: The staff at Silica Shop are dedicated to help you to get the best from your Amiga.

FREE NEWSLETTERS: Mailed direct to your home as soon as we print them, featuring offers and latest releases.

FREE OVERNIGHT DELIVERY: On all hardware orders shipped to Silica Shop customers within the UK mainland.

PRICE MATCH PROMISE: We will normally match our competitors offers on a 'same product same price' basis.

FREE TECHNICAL HELPLINE: Full time team of Amiga technical experts to help you with your technical queries.

But don't just take our word for it. Complete and return the coupon below for our latest Amiga literature and begin to experience the Silica Shop specialist Amiga service.

PHOTON PAINT PACK

A500 Computer	£399.99
TV Modulator	£24.99
Photon Paint	£69.95
TenStar Pack	£229.50
TOTAL RRP:	£724.43
LESS DISCOUNT:	£325.43
PACK PRICE INC VAT:	**£399**

1084S MONITOR PACK

A500 Computer	£399.99
1084S Colour Monitor	£299.99
Photon Paint	£69.95
TenStar Pack	£229.50
TOTAL RRP:	£999.43
LESS DISCOUNT:	£350.43
PACK PRICE INC VAT:	**£649**

FREE FROM SILICA

When you buy the Amiga 500 from Silica Shop, you will not only get a high power, value for money computer, we will also give you some spectacular free gifts. First of all, we are now including a TV modulator with every A500 stand alone keyboard, so you can plug your Amiga straight into your TV at home (the modulator is not included with the A500+A1084S pack as it is not required for use with monitors). Secondly, we have added a free copy of Photon Paint, an advanced graphics package with an RRP of £69.95. Last (and by no means least!), so that you can be up and running straight away, we are giving away the sensational TENSTAR GAMES PACK with every A500 purchased at Silica Shop. This pack features ten top Amiga titles which have a combined RRP of nearly £230! Return the coupon for details.

FREE TENSTAR PACK

When you buy your Amiga 500 from Silica Shop, we want to make sure you get the best deal possible. That is why we are giving away the TENSTAR GAMES PACK worth nearly £230, absolutely FREE with every A500 purchased from us. The TenStar Games Pack includes ten titles for the A500, each individually packaged in its own casing with instructions.

Amegas	£14.95
Art Of Chess	£24.95
Barbarian, Ult Warrior	£19.95
Buggy Boy	£24.95
Ikari Warriors	£24.95
Insanity Fight	£24.95
Mercenary Comp	£19.95
Terrorpods	£24.95
Thundercats	£24.95
Wizball	£24.95
	£229.50

TOTAL RRP: £229.50 INC VAT

DO YOU OWN AN AMIGA?

If you already own an Amiga computer and would like to be registered on our mailing list as an Amiga user, let us know. We will be pleased to send you copies of our price lists and newsletters FREE OF CHARGE as they become available. Complete the coupon and return it to our Sidcup branch and begin experiencing a specialist Amiga service that is second to none.

SILICA SHOP:

SIDCUP (& Mail Order) 01-309 1111
1-4 The Mews, Hatherley Road, Sidcup, Kent, DA14 4DX
OPEN: MON-SAT 9am - 5.30pm LATE NIGHT: FRIDAY 9am - 7pm

LONDON 01-580 4000
52 Tottenham Court Road, London, W1P OBA
OPEN: MON-SAT 9.30am - 6.00pm LATE NIGHT: NONE

LONDON 01-629 1234 ext 3914
Selfridges (1st floor), Oxford Street, London, W1A 1AB
OPEN: MON-SAT 9am - 6.00pm LATE NIGHT: THURSDAY 9am - 8pm

To: Silica Shop Ltd, Dept CCI 0789 1-4 The Mews, Hatherley Road, Sidcup, Kent DA14 4DX

PLEASE SEND ME FREE LITERATURE ON THE AMIGA

Mr/Mrs/Ms: .... Initials: .... Surname: ....

Address: ....

Postcode: ....

Do you already own a computer
If so, which one do you own? ....

Emlyn Hughes

INTERNATIONAL

SOCCER

GAME OF THE YEAR!

WINNER OF CCI OSKARS FOR BEST SPORTS SIMULATION AND BEST GAME OF THE YEAR!

Quite simply the best football simulation available for the 64 Nothing short of superb.

ZZAP 64

AVAILABLE NOW FOR COMMODORE 64

£9.95 tape £12.95 disk

Spectrum & Amstrad available now

Audiogenic

Audiogenic Software Limited, Winchester House,
Canning Road, Harrow HA3 7SJ, England

Order by phone on 01 861 1166 Access VISA

Hughes

TIONAL

GAME
OF THE YEAR!

WINNER OF CCI OSKARS FOR
BEST SPORTS SIMULATION
AND BEST GAME OF THE YEAR!

Audiogenic

udiogenic Software Limited, Winchester House,
nning Road, Harrow HA3 7SJ, England

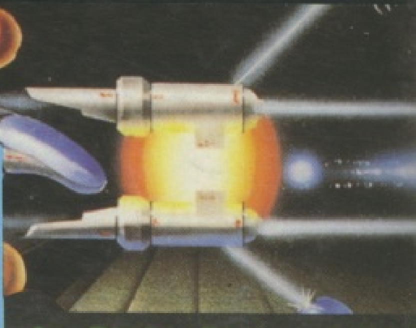
der by phone on 01 861 1166 Access VISA

COMMODORE COMPUTING INTERNATIONAL — JULY 1989

COMMO

£3.75

JULY 1989

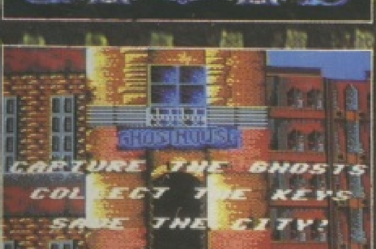


ONE DAY ALL COMPUTERS WILL BE LIKE THIS
THE AMAZING TRANSPUTER

DISK DISECTOR

MICROPROSE FLIES HIGH

THE MUNCHER
STORMLORD
STREETSPORTS
FOOTBALL
THE REAL
GHOSTBUSTERS
ONE-ON-ONE


GHOSTHOUSE
CAPTURE THE GHOSTS
COLLECT THE KEYS
SAVE THE CITY!

WIN! PORTABLE CD PLA
OCEANIC DISK DRIVES AND M